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EDITORIAL

Thomas Young

Universal Scholar and Father of Physiologic Optics

THE name of Sir Humphry Davy is thoroughly familiar to all students of science and to most well-read people in general, but for some reason his contemporary, the Quaker physician, Dr. Thomas Young, who made even more important contributions to general science, and especially to ophthalmology, is almost unknown, even to the members of the profession he adorned.

Young was born at Milverton, Somersetshire, England, in 1773, and at an early age began to manifest those qualities which led Garrison to classify him as "one of the greatest men of science of all time," by mastering Latin and several Oriental languages.

In 1792, at the age of nineteen years, he began the study of medicine under the eccentric master, John Hunter, and William Cruikshank, and the same year he read a paper before the Royal Society, in which he demonstrated that ocular accommodation for distance is due to changes in the curvature of the crystalline lens.

He was graduated at Göttingen in 1796, but being engaged upon other important studies, did not establish himself in the practice of his profession until three years later. His non-clinical activities, however, brought him position and a measure of fame, for in 1801 he was made professor of natural philosophy in the newly established Royal Institution.

Not satisfied with his European degree, he resumed his medical studies at Cambridge University, from which great institution he received his baccalaureate degree in 1803 and his Doctor's degree in 1808, thus becoming the most highly educated physician of his time. In 1811 he was elected one of the physicians of St. George's Hospital.

In 1801, in his memoir "On the Mechanism of the Eye," he gave the first description of astigmatism, with measurements and optical constants. He also stated the present Young-Helmholtz theory, that color vision is due to structures in the retina corresponding to red, green, and violet, color-blindness being due to a deficient response of these structures to normal stimuli. His outstanding contribution to the science of optics was, however, the discovery of the interference of light, which enabled him to show that the phenomenon of light is due to undulations of the ether (the wave theory of light).

Young's larger and more general contributions to medical literature, such as his "Introduction to Medical Literature," and the "Essay on Consumptive Diseases," contained nothing especially new or startling, but his amazing scholarship and his passion for meticulous accuracy made them, especially the latter, encyclopedic presentations of the knowledge of his time along those lines.

But the universality of Young's genius and the tremendous breadth of his interests

actually interfered with his success as a clinical practitioner. In a day when medical men were wont to arrive at decisions more or less by intuition and to apply heroic therapeutic measures promptly and without hesitation, his painstaking attention to the details of diagnosis was attributed by his contemporaries to timidity, though none of them could ever question the success of his methods of treatment. He knew too much about too many subjects to be a successful teacher of any one of them.

In other fields of scientific endeavor, he laid imperishable foundations. He introduced the modern concepts of "energy" and "work done," showing that they are proportional to each other; in 1804 (a year ahead of Laplace) he stated the first correct theory of capillary attraction; he defined the "modulus of elasticity" (Young's modulus); he discovered that the Egyptian hieroglyphics are not alphabetic letters, but phonetic symbols, and thus laid the foundations for the deciphering of some of the most important documents of antiquity. In fact, a mere list of his general scientific contributions would fill columns, for he wrote, helpfully and with assurance, upon such diverse subjects as ship-building, gas-lighting, the standardization of the seconds pendulum and the imperial gallon, longitude, and life insurance. It would seem that there was no art, profession, nor language that he did not comprehend.

In person, Dr. Young was probably the handsomest of all the great physicians. He was fond of dancing and all elegant social activities, and his kindliness, urbanity, good will, vivacity, and entire freedom from envy and jealousy, made him sought after as a companion, even if he was not popular as a medical attendant. His memory of facts and words was almost flawless; his pursuit of truth indefatigable; and his enthusiasm and generosity were such that he placed his immense stores of knowledge at the disposal of every student who consulted him without reservation, even though a lesser man might have considered those who sought his aid as his competitors in research.

He passed from the scene of his multifarious activities in 1829, at the age of only fifty-six years, and it is a sad reflection upon the perspicacity and appreciative power of this generation that the name of this towering physician, scientist, philosopher, linguist, archeologist, biographer, and universal scholar is not more widely known and reverenced than it is.

Propaganda

DURING the War a number of new words made their way into the popular vocabulary of the people of this country. Some of them were French words, like camouflage, adopted from our allies; others were words which had long been in the English dictionaries, but had never come into general use by "the man on the street," like propaganda, which goes back at least as far as 1627. This word is today used glibly by almost everybody, but relatively few of those who use it have any very clear idea of what it means, and more especially of what it connotes.

The dictionary says that propaganda is an "effort directed systematically toward gaining public support for an opinion or a course of action," but it does not give any idea of how this effort is applied or how and why it works.

There is a very old aphorism to the effect that "*Desire* is the whip that goads men on to action"; and it is a matter of common observation, by those who pay any attention to such matters, that people in general base their actions upon how they *feel* regarding any matter, rather than upon the dictates of intelligence and logic. These psychologic facts, plus the well-known power of suggestion, are the basis of all propaganda, the object of which is to put the thinking processes of its "victims" to sleep and to arouse their desires and emotions.

If a statement which is obviously or demonstrably false is repeated sufficiently often and widely, it will finally be accepted as true by those whose desires and feelings run along the same lines and who are too ignorant or too mentally lazy to *think* about it. That potent but intangible thing which we call "Public Opinion" is the result, at any moment, of the suggestions, both true and false, which have been made to the subconscious minds of a majority of our people by their experiences and observations, and by the various agencies of publicity, which today are most powerfully represented by the newspapers and magazines, the radio, and the movies.

Propaganda may be good or bad, according to whether it is motivated by high, altruistic aims, toward the welfare of the whole nation, or by narrow and selfish aims, for the benefit of a relatively small, but often vociferous, group or clique. It is so ubiquitous that it permeates the content of our consciousness

every day, and the only way an individual can decide what parts of it are good and what bad is to *think* about it—to propound to every dubious statement the pertinent question, "*cui bono?*"

In these complex and stressful days, there is no way in which a man who lives in any reasonably civilized society can escape from the floods of propaganda which are released upon him continually, and the only way in which he can demonstrate his right to the title of *homo sapiens*, as distinguished from the savage or the infant, is to read and listen and look with his mind alert and his emotions under control, constantly asking himself the questions, "Who, exactly, will benefit if I permit myself to act upon this, that, or the other suggestion? What are the *facts* behind this that I hear or see?"

The truth is now available in most lines, to those who seek it sincerely, but its discovery frequently means *hard work*. It is for courageous and open-minded adults—*men*—not for the intellectually slothful nor for the overgrown children. Yet upon the psychic stamina of our people to discover the truth, and their spiritual fortitude to act upon it, depends the future welfare of our Nation and of all the individuals who compose it.

If a man saves a little money . . . it is taken by the government and distributed to those who have been reduced to want by their own improvidence and the shortsightedness of manufacturers, bankers and economists.—Dr. Alexis Carrel.

Truth and Light

MANY people who, as a rule, think straight about most things, wander into devious byways when they consider truth. At least they *talk* as if it were a concrete *thing*, like a door-knob or a coal-scuttle, which is either present in its entirety or totally absent, instead of a *quality*, which inheres as much in the person who ponders upon it as in the thing or condition considered.

Few or no educated and thoughtful people now look upon heat as being the opposite of cold or light as the opposite of darkness, for they realize that cold and darkness are merely low degrees or the relative absence of the qualities we call light and heat, and are comparative and variable in quantity—if one may apply to a quality a term generally reserved for concrete objects.

This confusion arises, in part at least, from the common inaccuracy of mistaking facts for the truth. Facts are concrete things, matters of objective observation, and are not influenced by the personal equation. They are neither true nor false—they simply *are*. The truth is what we think or do about them, and depends largely upon our personal experience and viewpoint, so that the same concept may be relatively true for one person and relatively false for another.

It is a fact that the average per capita income (men, women, and children) of the people of the United States is about $600 a year. But for the struggling fellow who is trying to make that sum take care, not only of himself, but also of a wife and several children, it is far from being the truth. It is a fact that theft is a crime (it is so recorded on the statute books), but the truth as to whether or not it is a *sin* is a matter between the man who does it and his God.

When we reach the point where we can consistently think of truth as a quality, like heat and light, we will realize that error is not its opposite but merely its presence in relatively low degree, and our conceptions of men and things will be broader and sounder than they now are.

Madness is merely normality seen through a magnifying lens.—Edward Glover.

Postgraduate Week

THE summer, with its slackening of professional activity and its vacations, is over and medical men, rested and refreshed, are settling into the harness for the long pull of the colder months.

The autumn is the ideal time for the postgraduate week, which should be considered the *minimum* amount of time to be spent on formal professional advancement, by *every* physician, *every* year. The body is vigorous; the mind is keen; the time of heaviest practice has not yet arrived, but is coming soon, and with it the greatest number of opportunities to use new knowledge which may be obtained.

Class or individual instruction in some school is fine, when it is readily available, for the men who can spend the necessary time and money to obtain it. For the majority of doctors, however, the most practical method is to attend one of the rather few meetings which are really graduate schools, and of these the most important is the International Postgraduate Medical Assembly, which will be held this year at St. Paul, Minn., October 12 to 16, inclusive.

At this gathering, scores of the best-known

medical teachers in this country (and several from abroad) will be on hand to tell the fortunate ones who will be present just what to do and when and how to do it, in the care of sick folks —*practical* stuff that one can go home and *use*. A story of the meeting, with abstracts of a dozen or so of the papers and clinics, will appear in these pages shortly after the meeting, but that is by no means all of it.

One of the highest values of attendance at this Assembly is the revitalizing influence of *personal contact* with the leaders in one's profession and with the other keen and active men on the "firing line" who will be there. It is an opportunity which no physician who can in any way manage it can afford to miss. The hotels in St. Paul will be crowded so reservations should be made *at once*.

For those in the Midlands, who cannot attend the "big show," a smaller, but highly profitable gathering of the same general type will take place at Burlington, Iowa, when the Mississippi Valley Medical Society meets there on September 30 and October 1 and 2.

Every medical man who can possibly do so should decide, *now*, to attend one or both of these genuinely educational meetings, and should make his plans accordingly.

NEXT MONTH

(Special Parenteral Therapy Number)

Dr. Walton Forest Dutton, of Amarillo, Texas, will discuss, in a practical and helpful way, the pharmacodynamics of drugs used parenterally.

Dr. Fred D. La Rochelle, of Springfield, Mass., will present some interesting suggestions regarding the intracutaneous injection of vaccines.

Dr. Frank W. Porterfield, of Waterloo, Iowa, will set forth the rationale and results of the parenteral use of a polyvalent antibacterial agent.

Dr. George C. Croston, Sapulpa, Okla., will explain in detail (with illustrations) how to keep hypodermic needles in good working order.

Dr. C. E. Ward, of Cleveland, Ohio, will consider the important factors in and the technic of the ambulant treatment of hernia.

There will be several other important Leading Articles, and many practical abstracts dealing with parenteral therapy.

COMING SOON

"Toxemias in Carcinoma of the Colon," by D. Philip MacGuire, A.B., M.D., F.A.C.S., of New York City.

"The Roentgen-Ray Treatment of Non-Malignant Uterine Hemorrhage," by Maximilian J. Hubeny, M.D., F.A.C.P., F.A.C.R., of Chicago.

The Importance of the Rectum

THE specialties dealing with the upper end of the alimentary canal are decidedly popular and are considered highly genteel, while that dealing with the lower end of the same tube is looked upon as being pudendous and disgusting, in spite of the fact that the bacterial flora of the mouth and throat is as rich and varied as that of the rectum.

Most physicians neglect to make rectal examinations and give rectal treatments, to their own serious professional and economic disadvantage and to the detriment of their patients. This unsatisfactory condition should be remedied.

On the other hand, an enthusiastic specialist has a tendency to see, in the organs which occupy his chief interest, the source of all or most of the ills to which human flesh is heir. This is illustrated in our *Proctology* department this month.

While we cannot fully agree with all the statements made by Dr. Burns, regarding the superlative importance of proctitis as a universal cause of morbidity, it may be well that his thesis should be overstated, in order, in some measure, to overcome the apathy of the medical profession in this direction.

LEADING ARTICLES

Low-Dose Irradiation of the Pituitary and Adrenals for Essential Hypertension*

By James H. Hutton, M.D., F.A.C.P., Chicago

SOME years ago the late Dr. Frank Smith, Chief Surgeon of the Wabash Railroad, suggested that I investigate the endocrine aspects of essential hypertension. The studies thus initiated uncovered an astonishing amount of evidence—clinical, experimental and from the laboratories of pathology—all pointing to the pituitary and adrenals as probably being responsible, not only for many cases of essential hypertension, but also of diabetes mellitus. This evidence was summarized in an article published in the *Illinois Medical Journal* in December, 1933.[1]

While these studies were in progress, I had under observation a young man who had had hypertension for several years. He complained of headaches and easy fatigability, and his family complained of irritability on his part. He developed a spontaneous intracranial hemorrhage and was unconscious for several days. Shortly before that, Cushing's[2] articles on pituitary basophilism had appeared. I was particularly impressed by the results he achieved, in a few cases, by irradiation of the pituitary. Because the case seemed hopeless and the patient presented some signs of basophilism, I persuaded Dr. Harry Olin to irradiate his pituitary. To our surprise he shortly recovered and, within ninety days from the onset of the hemorrhage, was again teaching school. He became and has remained symptom-free. His blood pressure, while still not down to normal levels, is about 40 mm. systolic and 20 mm. diastolic lower than before treatment was instituted. Experience since that time tends to strengthen the opinions expressed in the original article.

Barnes[3], in the meantime, has irradiated the pituitary and adrenal regions of pancreatectomized, totally-diabetic dogs, and in every instance has been able to reduce materially (about 50 percent) the severity of their diabetes, using essentially the same factors and giving the treatment on the same machine that we use in the treatment of human patients. He is of the opinion that irradiation of the adrenal region is the most effective part of the procedure. However, this is another case where results achieved in the experimental animal cannot, so far, be duplicated in the human patient.

*Received for publication June 13, 1936.

Diabetes Mellitus

We† have treated about 50 cases of diabetes, which may be divided, roughly, into three groups: One-third have apparently been helped in no way; another third have experienced considerable symptomatic relief, with an inconsequential increase in carbohydrate tolerance; the other third have experienced, not only symptomatic relief, but a material improvement in carbohydrate tolerance, to the extent that a number have been able either to discontinue the use of insulin or to increase their diet without glycosuria.

Carbohydrate metabolism is frequently disturbed in essential hypertension, and there is a closer resemblance than appears at first sight between this syndrome and diabetes mellitus. O'Hare[4] thought the glucose (dextrose) tolerance test could be made use of in separating the essential from the nephritic type of hypertension. Those patients exhibiting a diabetic type of sugar curve he thought belonged in the essential hypertension group. We are not sure that this is correct, but our findings along this line are presented in Table I.

TABLE I

DEXTROSE TOLERANCE TESTS DONE ON 101 PATIENTS	
Non-diabetic type of curve	41
Diabetic type of curve	
Blood sugar rose to between 170 and 200	19
Blood sugar rose to over 200	41
	60
	101

†Many of these cases have been in employees of the Illinois Central Railroad, and I am indebted to Chief Surgeon G. G. Dowdall and to Drs. Sloan, Olson, Lampe, Morris and various members of the intern staff of the Illinois Central Hospital for the privilege of seeing and including their cases in this series. They had been under the observation of some of these members of the Illinois Central Hospital Department for some years, so that the status of their hypertension was well established before they were subjected to this treatment. I am also indebted to Dr. E. E. Madden, Dr. Louis G. Singer and Dr. William L. Culpepper for their cooperation with some private cases.

Furthermore, about ten percent of our patients have had both hypertension and diabetes. Our experience with them is summarized in Table II.

TABLE II

HYPERTENSION AND DIABETES	
Both conditions improved	7
Only hypertension improved	8
Only diabetes improved	5
Insufficient treatment or can not be followed	7
	27

An example of patients of this type is Mr. H., who came under observation in September, 1933, at the age of 53 years. His diabetes was discovered shortly after an attack of mumps, at the age of 45. His hypertension began two years later and had been as high as 250/160. He complained of weakness, diplopia, severe headaches (which had many times required the use of morphine for relief), and transient attacks of blindness. He did not take insulin and showed glycosuria most of the time.

After a few x-ray treatments the glycosuria disappeared and has recurred but once since that time. His blood sugar has been normal for more than two years. His blood pressure declined to 165/95 and remained about that figure for more than a year. Following a period of physical and emotional strain, he experienced a return of most of his symptoms and his blood pressure was found to be 260/140; but within a few days it fell to 150/80. During this time he was given dextrose intravenously, in spite of which fact his blood sugar, a few days later, was found to be only 80 mg. per 100 cc. In other words, the administration of dextrose intravenously did not precipitate a return of the diabetic syndrome. There has since been some increase in blood pressure and return of symptoms, but further treatment has not yet been administered.

Hypertension

The response of patients having only hypertension is presented in Table III.

TABLE III

HYPERTENSION	
Improved	131
Unimproved	53
Insufficient treatment or can not be followed	68
	252

It should be noted that "improvement" indicates, not only symptomatic relief, which occurs in a higher percentage of cases, but a material reduction in blood pressure, either to normal or by 30 mm. systolic and 20 mm. diastolic. Most of these cases had been under observation for a sufficient period to determine the status of their hypertension long before they were subjected to this treatment.

A number of other men in various parts of the United States and Canada have used this method of treatment. Their results are shown in Table IV.

TABLE IV

	Cases	Cases Improved
Martin	100	80
Baker	40	30
McGuffin	40	30
Finch	12	9
Konantz	6	3
Parkhurst	5	3
Hadley	4	4
Miscellaneous	56	47
Totals	263	206

Hyperthyroidism

A number of writers[5] have commented on the resemblance between hyperthyroidism and essential hypertension, and Hamilton and Knight[6] say that a review of the literature suggests that the adrenals and thyroid are intimately concerned in the production of these two syndromes, with the adrenals playing the dominant and controlling rôle. We have been able to collect a reading of the basal metabolic rate (B. M. R.) on 113 cases of hypertension. The results are shown in Table V.

TABLE V

B. M. R. minus more than 5%	34
B. M. R. plus more than 10%	36
B. M. R. within normal limits	43
	113

Nineteen (19) were more than 20 percent above normal, but only a few of these exhibited the signs of hyperthyroidism. However, in 2 the diagnosis of Graves' disease seemed justified. One woman of 59 had had a subtotal thyroidectomy in 1928, another in 1929, and a third had been recommended when she came under my observation in November, 1934. She had the usual signs and symptoms of Graves' disease and had lost 20 pounds in the previous three months. Her pulse was 120; B. M. R., plus 56 percent; blood pressure, 205/75. Treatment was directed at the hypertension; the pituitary and adrenals were irradiated. After six treatments, at weekly intervals, her blood pressure was 135/95; her B. M. R. had fallen to plus 18 percent; and she was free from symp-

toms of Graves' disease. Seventeen months after the last treatment the blood pressure was, right, 165/90, and left, 155/90, and the B. M. R. was plus 14 percent.

Another woman of 46 years complained of nervousness, palpitation, insomnia, and irritability. She had a marked tremor of the fingers and tongue. There were no eye signs. The thyroid was small. Her B. M. R. was plus 48 percent and her blood pressure 170/100. After three treatments, directed at the pituitary and adrenals, her B. M. R. was minus 6 percent, her blood pressure 145/90, and she was symptom-free.

Methods of Study

We evaluate the kidney status in every case, and rule out most patients with nephritic hypertension. We are inclined to agree with Goldzieher,[7] that essential hypertension may eventuate in nephritis. In addition to the usual careful history and physical examination, a number of urinalyses are made; a phenolsulphonephthalein test is carried out on all patients; a complete blood count is made, and blood chemistry studies, consisting of a determination of the non-protein nitrogen, urea, uric acid, blood sugar and calcium; and routine Kahn and Wassermann tests are performed. There is, many times, an improvement in kidney function, as measured by the dye test, following irradiation.

Nowadays all patients are subjected to Stieglitz' amyl nitrite test, which gives a rather accurate idea as to how much of the hypertension is due to vascular spasm, and consequently how much of it we may expect to relieve. This test is not always easy to perform accurately, as the maximum fall in blood pressure is sometimes very transitory and difficult to determine. The amount of relief and reduction in blood pressure effected by irradiation is greater, in some cases, than the fall in blood pressure noted during this test.

In most patients a film of the sella turcica is obtained before treatment is begun. We believe that its appearance is of considerable significance. Patients exhibiting a sella at the upper limit of normal for size, with some excess of calcium in or about it, usually respond favorably to this type of therapy. Patients with a very small, shallow sella usually do not respond quite so well.

Technic of Treatment

These treatments, consisting as they do of about one-ninth of an erythema dose, are entirely without danger. The factors used are: 120 kilovolts; 50 cm. skin-target distance; 2 mm. aluminum filter; 3 milliamperes; 5 minutes—delivering 50 R units. Each side of the pituitary is treated through a portal measuring 10x10 cm., and the adrenals through a common portal 15x15 cm. Both glands are treated on the same day.

It is important that a careful technic be followed. For example, it is abundantly demonstrated, not only by our experience, but also by the experience of others,[8] that only mild doses are effective. We gave, to a few patients, the following treatment: 180 kv; 50 cm. s-td; 1 mm. aluminum and 0.25 mm. copper filter; 6 ma.; 15 minutes—199.5 R. Every patient so treated experienced an unpleasant reaction, characterized by headache, vertigo, weakness, and occasionally nausea, and the blood pressure was scarcely affected by this dose.

Men who plan to use this type of therapy should adopt certain precautions. As already indicated, the dose should always be small. We prefer to use the technic described. McGuffin,[9] however, reports favorable results with 200 kilovolts, but he delivers only 50 R units per area treated—the same amount of irradiation delivered by our technic. Ours may not be the optimum doses, but certainly, as a rule, the amount of irradiation given any one area should be under 100 R.

Treatments are repeated at intervals of not less than a week, and they may be much further apart. We have a few cases in which one treatment was followed by a fall in blood pressure to normal levels, where it remained for several months. A tendency to rise was then promptly checked by another treatment. The frequency of repetition should depend on the blood pressure response. If there is a marked fall in blood pressure and relief of symptoms after one treatment, another should not be given until either there is a rise in blood pressure or it is evident, after a number of observations at three- to five-day intervals, that no further fall can be expected as a result of the treatment already given.

Treatments should not be administered during or within a week before a menstrual period. For some reason, if they are given during that time, they are likely to be followed by headache, malaise, and sometimes by a return of symptoms and a rise of the blood pressure.

Treatment should not be turned over entirely to a technician, or even the roentgenologist. The attending physician should see his patient every three to five days for a few months, until he is sure what that particular patient's response will be.

Phenomena Following Treatment

There is usually prompt relief of headache, vertigo, tinnitus, and precordial pain following these treatments, which generally have a sedative effect. Patients say that they feel relaxed, comfortable, and drowsy. The hot

flashes of the menopause are usually relieved. The skin tends to assume a better texture.

So far as can be determined, the phenomena reported to follow splanchnic resection or adrenal denervation are of about the same kind and order of magnitude as those that follow irradiation of the pituitary and adrenal region. Furthermore, it is entirely likely that our observations in the course of this study, plus the response of any individual patient to this treatment, will enable us to select patients who should be referred to the surgeon, not for splanchnic resection alone, but for that operation, plus removal of the first and second lumbar ganglia and part of the adrenals, particularly if they are found to be hypertrophied or the seat of adenoma. The following indications point in that direction:

1.—Malignant hypertension. This should always arouse the suspicion of adrenal adenoma.

2.—Young patients.

3.—Hirsutism in females. Such women usually have a very heavy head of hair, which is coarse and harsh.

4.—Menstrual disorders, particularly amenorrhea or dysmenorrhea.

5.—Retinal lesions.

6.—Small sella turcica.

7.—Slight response or lack of response to small doses of irradiation.

8.—Intravenous urography would offer some evidence, if the adenoma was of sufficient size.

Harrison[10] makes the following statement, with which we fully agree: "Irradiation will help to avoid unnecessary operations on the sympathetic nervous system, and operative interference should not be attempted until the effect of irradiation has first been definitely established. It is highly probable that the operation will prove ineffectual if irradiation has failed to secure any improvement."

The introduction of any new procedure in therapeutics is bound to be followed by its application to far-advanced, hopeless cases, where common sense should indicate its inevitable failure. However, its failure to perform the expected miracle in such circumstances is likely to discredit it with the profession.

X-Ray therapy, applied to the pituitary and adrenal regions, is not offered as a cure for hypertension or for hyperthyroidism. It is offered as a valuable addition to our armamentarium in the treatment of these syndromes and others that have, as one factor, a disturbance of the vegetative nervous system and the endocrines most closely related to it —the pituitary, thyroid, and adrenals.

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PROPERTY

Property is the fruit of labor. Property is desirable; it is a positive good in the world. That some should be rich shows that others may become rich and hence it is a just encouragement to enterprise. Let not him that is houseless pull down the house of another, but let him work diligently and build one for himself; thus by example assuring that his own shall be safe from violence when built.—ABRAHAM LINCOLN.

WHO MAKES WAR?

Every move that is made now to deprive the people of their decision on all matters through their elected representatives and to delegate those powers to the executive, brings us that much nearer war. It removes the only possible check. No one man or group of men incapable of fighting or exempt from fighting should in any way be given the power, no matter how gradually it is given them, to put this country or any other country into war.—ERNEST HEMINGWAY, in *Esquire*, Sept., 1935.

The Endocrines and Hyperinsulinism

By Ellis Powell, M.D., West Monroe, La.

ANY disease that impairs "the fuel of the brain"[1] deserves most intensive study. As has been previously explained, hyperinsulinism causes hypoglycemia (a scarcity of sugar in the blood) which, in turn, deprives "the brain, which lives exclusively on sugar,"[1] of its fuel, its food supply. Thus it is, briefly, that "hungry brains"[2] are produced and give any symptom complex that a malnourished or malfunctioning brain is capable of producing.

In the treatment of this condition the underlying cause must be corrected—the low sugar levels must be restored to normal. As to the cause, I am not unmindful of the fact that about thirty theoretical causes have been given, and perhaps as many more could be added by a careful study of the pathologic chemistry of metabolism, endocrine dysfunction, etc.

This discussion, however, will be limited strictly to the blood-sugar level, which, according to Cori,[3] "depends on the relative rate at which sugar enters and leaves the blood stream. Maintenance of a constant blood-sugar concentration requires an in- and out-flow of sugar of equal magnitude. When the equilibrium is disturbed, the blood sugar may either rise or fall, depending on the preponderance of the processes which contribute or which cause a withdrawal of sugar from the blood. Since the blood sugar of mammals remains normally in the neighborhood of 0.1 percent (100 mg. per 100 cc. of blood), there must be a regulatory mechanism which is set in motion whenever the blood sugar ranges much below or above this figure. It is now generally accepted that a rise in blood sugar elicits a secretion of insulin, and that a fall below a certain level is followed by a discharge of adrenalin. The mechanism of blood-sugar regulation is, therefore, intimately connected with the action of these two hormones on blood-sugar production and utilization."

Thus, for practical purposes, we find that only insulin and epinephrin are of importance and, as is well known, an excess of insulin (ordinarily referred to as hyperinsulinism) will burn the normal blood sugar to low levels, so that first consideration must be given to curtailing any excessive output of insulin—to reducing any possible hyperfunction of the pancreas.

The pancreas is capable of normal, hypo- or hyperfunction—of producing a normal amount of insulin, a deficient, or an excessive amount, depending largely on its relations with its cooperative endocrines (the liver, parathyroids, and duodenum) and with its antagonistic endocrines (the adrenals, female gonads, thyroid, and pituitary). If the relationship is normal, normal function is possible, but through dietary errors, tumors, etc., the pancreas may become hyperactive and largely subdue its antagonists, or, from various causes, the antagonists may function inadequately and fail to check or control the pancreatic activity, thus permitting hyperactivity with excessive insulin production. A hyperfunctioning pancreas, then, implies hypofunction of the adrenals, the female gonads, the thyroid, or the pituitary, or several of these organs in various combinations and degrees of severity. This polyglandular disturbance, together with the resulting diminution of the fuel supply of the brain, is certainly enough to play havoc with the victim, both physically and mentally.

A series of blood-sugar studies will clear up many endocrine problems. Its value lies, not only in demonstrating a hyperfunction of the pancreas, but also will explain some of the cases of amenorrhea, dysmenorrhea, mental upsets during the menstrual period, etc.—in fact, it will shed light on any condition that may result from hypofunction of any or all of the endocrines that are antagonistic to the pancreas.

Endocrine Antagonists of the Pancreas

In addition to the dietary treatment of hyperinsulinism, which consists largely of frequent feeding of a high-fat, low-carbohydrate diet, which gives the minimum stimulation to the pancreas, it frequently becomes necessary to further subdue the pancreas. This is done by increasing the activity of the antagonistic endocrines.

Adrenalin normally plays the principal part in preventing the blood-sugar level from descending too low; but since there is no product of the adrenal medulla which is effective orally, and since the effect when epinephrin is given hypodermically is so short, together with its undesirable by-effects, it is of no practical value in these cases, except in an emergency.

The part that the thyroid plays may be accurately determined by a basal metabolism test, and treatment may be begun to increase its strength, if indicated, and thus give more assistance in checking the excessive activity of the pancreas.

The female gonads must receive particular attention, as they undoubtedly play a great part in antagonizing the pancreas. Many women attribute their symptoms of hyperinsulinism to menstrual irregularities, particularly amenorrhea, and Tedstrom and Wilson[4] have recently discussed the occurrence of dysmenorrhea as a symptom of hypoglycemia

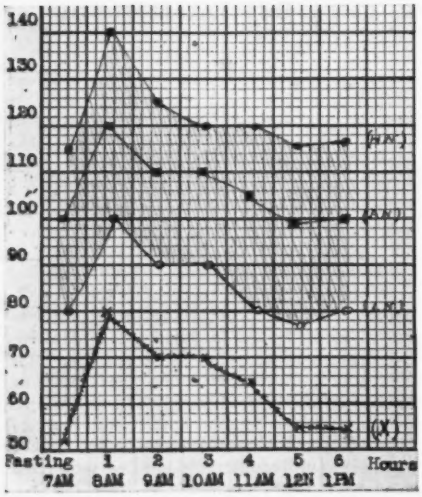

Fig. 1.—The blood-sugar curve of Mrs. X (X); high normal (HN), average normal (AN) and low normal (LN) blood-sugar curves are given for comparison. All sugar estimations are expressed in milligrams per 100 cc. of blood.

and reported favorably upon its relief, in a considerable number of patients, by the intravenous injection of 50-percent dextrose solution.

While discussing the antagonists of the pancreas, we should not forget the underlying disturbance in the carbohydrate metabolism and should attempt to find the endocrine organ that plays a part in it. As such, the posterior lobe of the pituitary presents itself. It is concerned with the metabolism of sugar. In fact, it has been said that normal posterior-lobe activity is essential to carbohydrate metabolism and that the secretion of the posterior lobe acts synergically with the adrenals and the thyroid and in opposition to the pancreas.

Upon further study of the pituitary we will learn that "the relationship of the pituitary to the psyche is close, and various diseases of the pituitary may produce nervous annoyances and psychic manifestations"; and Cushing has said, "There can be little doubt that the psychasthenias and neuroses, of one sort or another, will prove to be associated with ductless-gland disturbances, more particularly those of pituitary origin." Unquestionably cerebral activity is influenced by the endocrines, and we should recall that the posterior lobe is connected with the cerebro-spinal fluid, which causes Bandler to say, "It seems inconceivable that this gland should have been placed in this position, its relations to the cerebral structures so close, without its having a marked nutritional and protective value on these structures."

Without question, hyperinsulinism, hypoglycemia or low blood sugar, does cause marked nutritional disturbances in the brain which, in turn, cause marked disturbances in function and result in mental upsets varying from the mildest neurosis to the gravest psychosis. There is no doubt that the posterior lobe of the pituitary does play a great part in carbohydrate metabolism, by preventing an excess of insulin and the destruction of the fuel of the brain. In fact, its nutritional and protective value to the brain is such that its normal functioning is essential for mental wellbeing.

Therapeutic Applications

The beneficent effect of this line of treatment in hypoglycemia and its multitudinous symptom complexes has recently been shown

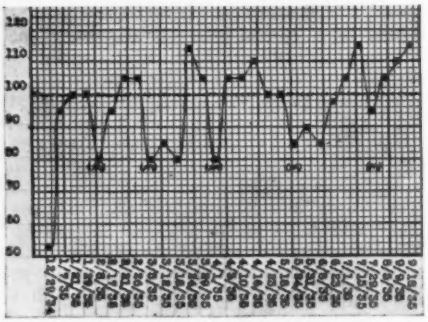

Fig. 2.—The "road back" of Mrs. X, representing fasting blood-sugar levels, expressed in mg. per 100 cc. of blood. (M) refers to menstrual periods.

by Goldzieher[5]. In his series of 112 hypoglycemic patients, 88 showed evidences of hypopituitary function and 20 were hypothyroid. Seventy-four (74) of these cases were improved by dieto- and organo-therapy.

In my hypoglycemic patients I have been using the high-fat, low-carbohydrate diet, together with posterior pituitary preparations, for the past four years. During this time I have treated the mildest neuroses and the gravest psychoses in this manner, and have not failed to improve the blood-sugar levels, and with them to improve the nutrition and the function of the brain.

A typical response to this line of treatment is seen in the blood-sugar studies of Mrs. X (for clinical report see Clin. Med. & Surg., Feb., 1936). Figure 1 (X) shows the blood-sugar curve as it existed at the beginning of treatment, and Figure 2 shows the response to treatment as revealed by fasting sugar readings.

After demonstrating that a marked hypoglycemia existed, she was given feedings of a high-fat, low-carbohydrate diet every three hours, together with 1 cc. of posterior pituitary extract daily, hypodermically, and

1 grain orally, three times daily. Under this regime the sugar levels gradually returned to normal, except during each menstrual period (Fig. 2-M), at which times there was a partial relapse in her blood sugar levels and in her mental condition. Ovarian extract, for its menstrual benefit and its antagonism to the pancreas, was added to the treatment, and the results are shown by the subsequent blood-sugar levels. With the return of the sugar levels to normal, the nutrition of the brain and its function improved, so that Mrs. X returned to a normal mental condition and has so remained.

In these cases I have looked for, but have never found, any contraindications to the use of post-pituitary preparations in either males or females. I have never seen it produce hypertension or hyperglycemia—in fact, nothing but benefit.

In these cases the pituitrin is pushed to effect, as indicated by a "mild cramping in the stomach." As a rule a beginning is made with 0.5 cc. daily, and increased, in 2 or 3 doses, to 1 cc., and perhaps 1 to 3 grains are given daily by mouth, in addition, to reach the dose that produces the "mild cramps." If preferred, the oral route may be used entirely, but improvement will necessarily be slower. After the fasting sugar levels have been normal for a time, the hypodermic injections of pituitrin are gradually omitted. The oral administration is continued for a time, then gradually reduced, and by frequent blood-sugar tests the maintenance dose is determined and is continued indefinitely or until observation reveals that the condition has been corrected.

"Every medical practitioner should be on the alert for this etiologic factor, in any patient he treats who shows mental symptoms. His vigilance may be the means of restoring many potentially useful citizens to their rightful spheres of activity. Perhaps many of the patients in mental hospitals could be discharged and allowed to resume their places in society, instead of being incubuses about the necks of their families, if the blood-sugar range of every mental patient were investigated."[6] The subject of hypoglycemia or hyperinsulinism, with its resulting nervous and mental diseases and the treatment thereof, deserves intensive study.

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The Diagnosis and Treatment of Entameba Histolytica Infestation

By Alonzo C. Tenney, M.D, Chicago, Ill.

SINCE the discovery of the entameba hystolytica as the cause of a perforating intestinal ulcer, in November, 1931, I have discovered 53 patients who were infested with this organism among my regular clientele, up to June 15, 1936. None of these presented the usual "textbook symptoms"; none had dysentery; none was confined to bed because of the presence of the amebas, except the first patient referred to, and that one because of the perforation of the bowel.

This rather unusual medical experience may be explained in part by the fact that my practice is confined almost solely to office diagnostic work, with its associated internal medical routine.

Only two of these patients lost any time from their regular employment after coming under my observation. Many, however, had been previously treated for "intestinal flu," and came to me primarily because of a continued state of ill health and gastric and intestinal disturbance following their acute attacks.

It is my opinion that, had they been examined by the special technic necessary for the discovery of the ameba, it would have been recognized at the time of the acute illness. Most of these acute attacks had occurred during the summer of 1934, and some of the patients were confined to bed for a few days because of fever, abdominal discomfort and profuse diarrhea before I saw them.

To illustrate the ease with which this infestation becomes a "masked" or "silent" phenomenon, I am tabulating 20 cases in which I had the opportunity to make repeated fecal examinations under proper conditions. These conditions are as follows: The patient goes to the laboratory in the morning fasting, and on arrival is given a dose of 15 Gm. (½ ounce—2 tablespoonfuls) of magnesium sulphate. He remains in the laboratory until he has passed five or six stools following the cathartic. These stools are passed into a warm container and are immediately examined microscopically, on a warmed stage.

In the first column of Table I ("before treatment") is indicated the serial number

of the stool or stools in which the amebas were found most abundantly. In the second column is indicated the stool or stools in which the amebas were found more abundantly after treatment.

TABLE I

Before Treatment		After Treatment
Case No.	Stool Nos.	Stool Nos.
1	1, +	3, 4, 5 only
2	1, ++	3, 4, 5
3	1, +	3 and 4 only
4	1, +	2, 3, 4
5	1, +	3, 4, 5
6	1, +	3 only
7	1, +	none
8	1, +	none (after rest from treatment, 1, +)
9	1 to 5+	3 only (after rest from treatment, 5; after further rest from treatment, 2, +)
10	1 to 6+	4 only
11	1 to 5+++	1 to 5, scarce
12	1, +++	4, + (after rest from treatment, 1, +)
13	1, +	3, scanty
14	1, +	2, + (after rest from treatment, 1, +)
15	1 to 5+++	2, scanty; heaviest in 5
16	1 to 4+++	2 to 5, scanty
17	2 to 4+++	4 and 5, scanty
18	1, +++	4 and 5, +
19	1, +++	2, scanty
20	1, scanty	3, scanty

Thus it will be seen that many of these cases would ordinarily be considered as "cured," if this conclusion were based upon an examination of the first and second and sometimes the third stools, with negative findings.

In all cases where the amebas are reported as "scarce" or "scanty," they would have been missed entirely by the ordinary routine examination, especially if the stool was not kept warm and examined on a warm stage.

This experience led me to make a special study of the effects of non-toxic amebacides. The drug with which I had the best results was Diodoquin (diiodohydroxyquinoline), which was administered in 11 controlled cases. Table II gives the results, together with the date when the drug was first prescribed and the subsequent conditions of the patients.

All patients in this group were very cooperative and only one has passed to other medical care.

The problems of treatment were frankly explained to the patients and the present situation is highly satisfactory, from a general health standpoint, to these individuals, even though an occasional renewal of the prescription is advised.

TABLE II

No. of case	Date of first prescription	Results
1	June 29, 1935	No amebas found in first or second evacuations thereafter.
2	Aug. 26, 1935	Complete absence of symptoms.
3	May 27, 1935	Steady decrease in amebas; symptom-free.
4	May 27, 1935	Returned for renewal occasionally.
5	Oct. 3, 1935	Very chronic. One week's treatment each month keeps patient symptom-free.
6	Feb. 13, 1936	Symptom-free with an occasional treatment of one week.
7	July 5, 1935	Occasional treatment of one week relieves all symptoms.
8	May 21, 1935	Reported negative by examination a few months later. Patient has not returned.
9	Aug. 26, 1935	Patient has not returned.
10	Sept. 6, 1935	One week's treatment occasionally keeps patient symptom-free.
11	Aug. 26, 1935	Patient so well he will not submit to another fecal examination.

The routine is very simple, consisting merely of the administration of two 3½ grain (227 mg.) tablets of Diodoquin after two or three of the meals each day, until 50 tablets have been consumed. This is followed by a rest period of two, three or four weeks, when the prescription is renewed if the slightest gastro-intestinal disturbance is experienced.

Since June 15, 1936, two more cases have come under observation in routine examinations.

25 E. Washington St.

OUR OWN EFFORTS

The medicine-men in Washington have been teaching us to look to them for a solution of all our problems. We are told that, by using arbitrary power and bureaucracy, we shall reach the "more abundant life."

I, for one, think we shall reach it through our own efforts, or not at all.

And our own efforts must be directed, not only to the performance of our individual tasks, but to the intelligent and vigilant exercise of our duties as free citizens of a free republic.—JAMES P. WARBURG, in Vital Speeches, *Jan. 1936.*

The A-B-C of Cancer

9-A. Tumors of the Nervous System*

By Charles F. Geschickter, M.D., Baltimore, Md.
The Surgical Pathological Laboratory, Johns Hopkins Hospital and University

THE tumors of the nervous system are divisible into three major groups:

1.—Tumors of the central nervous system including brain, spinal cord and eye.

2.—Tumors of the peripheral spinal nerves and their sheaths, including melanotic tumors.

3.—Tumors of the sympathetic and chromaffin systems.

Tumors of the central nervous system rarely involve the neurocytes or neuroblastic tissue. Instead they are practically confined to the glial or supportive tissues. The probable reason for the absence of involvement of neurocytes by tumor is the rapid differentiation of this tissue prior to birth and its loss of regenerative powers. The glial tissue of the central nervous system, on the other hand, retains its power of multiplication, and the majority of the tumors of the brain and spinal cord are forms of glioma. Tumors of the hypophysis and pineal gland have been excluded from this discussion.

The peripheral spinal nerves, like the central nervous system, rarely give rise to tumors involving the neurocytes. Instead the neurilemma sheaths and supporting connective tissue, corresponding to the glial tissue in the brain, provide the most frequent source of neoplasms of the peripheral nerves.

Benign and malignant pigmented moles are probable derivatives of the end-organs or sheath cells of the spinal nerves and may be included in this group.

True neuroblastic tumors are found in the outlying ganglia of the sympathetic nerves, in the chromaffin tissue of the adrenal medulla, and in similar tissue of the carotid gland at the bifurcation of the carotid artery. The socalled argentaffine tumors of the gastro-intestinal tract may be included with this group, on the basis of pathologic and clinical behavior.

Table I shows the classification and incidence of these tumors recorded in the Surgical Pathological Laboratory of the Johns Hopkins Hospital.

TABLE I

Central Nervous System†
(Brain, Spinal Cord and Eye)

1.—Glial Tumors	580
Medullo-gliomas	100
Spongio-gliomas	250
Astro-gliomas	200
Ependymo-gliomas	20
Oligodendrogliomas	10
2.—Sheath Tumors	216
Acoustic	70
Meningeal	106
Choroidal	40
3.—Ocular Tumors	120
Retinoblastomas	30
Choroidal melanomas	75
Intra-orbital neuromas	15
Tumors of the Peripheral Spinal Nerves	
1.—Nerve Sheath Tumors (False neuromas)	780
Palisaded neuromas	80
Myxoid neuromas	350
Sarcomas	350
2.—Tumors of the Nerve Fibers (True neuromas)	44
Amputation neuromas	40
Ganglioneuromas	2
Neuro-epitheliomas	2
3.—Melanomas	481
Benign melanomas	215
Malignant melanomas	266
Sympathetic and Chromaffin Tumors	
1.—Neuroblastomas	40
2.—Paragangliomas	28
2.—Argentaffine tumors	35
2.— (total)	63
3.—Gangliomas	8

Gliomas of the Central Nervous System

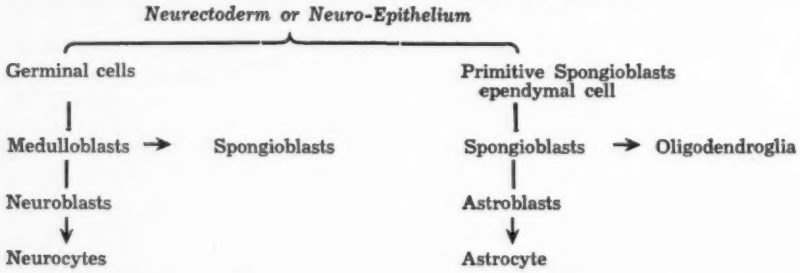
The central nervous system is composed of two main types of cells, the neurocytes and the interstitial elements—neuroglia and microglia. It is from the antecedents of the neuroglia that gliomas, the most common form of brain tumor, are derived. No tumor as yet has been demonstrated to have its origin in mesoglia or microglia and these cells are at present regarded as the phagocytes. The neuroglia is derived from ectoderm and the microglia from the mesoderm.

Early in embryonic life an ectodermal invagination (neurectoderm) forms the medullary groove which, in the adult, is represented by the central canal of the spinal cord and the ventricles of the brain. The medullary groove or plate is made up, first, of undifferentiated cells which give rise to germinal cells, on the one hand, and primitive spongioblasts on the other. The spongioblasts in their development give origin to adult neuroglia or astrocytes, while the germinal cells, by rapid mitotic division, produce neuroblasts and adult neurocytes. Schaper pointed out that undifferentiated germinal cells may also produce spongioblasts and glial tissue.

*This is the first installment of a two-part article.

†125 hypophyseal tumors, 10 tumors of the pineal gland, and 35 epidermoid cysts, angiomatous cysts and teratomas have been excluded from this group.

CYTOGENESIS OF CHIEF ELEMENTS OF THE CENTRAL NERVOUS SYSTEM



Medulloblastomas or Medullogliomas: The medulloblastomas contain medulloblasts, which are either primitive neuroblasts or spongioblasts. Histologically, they resemble sympathoblastomas of the adrenal medulla and retinoblastomas of the eye. The usual location for these growths is in the cerebellum, in young people, and occasionally in the cerebral hemisphere or spinal cord of adults. The most frequent syndrome in children with medulloblastoma of the cerebellum is headache, vomiting, ataxia, choked disc, and occasionally hydrocephalus. The average duration of life is fifteen months. Cures are rarely effected. These tumors may transplant in the cerebrospinal spaces, but true metastases, as in other gliomas, are rare. Cushing estimates that these tumors comprise 12 percent of all gliomas and 6 percent of all brain tumors. At operation the tumors present a reddish-gray appearance; they are usually found in the vermis of the cerebellum and may extend into either lateral lobe. They are not extremely vascular, but because of their invasiveness, operative mortality is high—approximately 33 percent in Cushing's series.

Under the microscope the tumor is found to be made up of many small cells with dense nuclei showing mitotic figures resembling a lymphosarcoma. Some cells, immature spongioblasts, have indefinite tails or are carrot-shaped. Neuroglial fibrils can be demonstrated by special staining methods. The cells may form pseudo-rosettes.

Rarely, undifferentiated forms of medulloblastomas may be found in the mid-line of the brain stem. They resemble the primitive neurectoderm and have been termed neuroepithelioma or medullo-epithelioma.

Spongioglioma or Glioblastoma (Spongioblastoma multiforme and polare): This is one of the most common forms of brain tumor, comprising over one-third of the cases in the present series. They occur in middle life, almost exclusively in the cerebral hemispheres, and occasionally are multiple. The undifferentiated form of spongioblastoma (multiforme) is rapidly fatal, the duration of life after onset averaging about a year. The tumors are soft, vascular, and may be cystic. They do not metastasize.

Microscopically, *spongioblastoma multiforme* shows a wide variation of cell type. Some are elongated like fibroblasts, others are multinucleated and are of giant size. Some cells are assembled in palisades. Areas of necrosis are frequent. Because of their cerebral location, hemiparesis and convulsions, in addition to signs of intracranial pressure, occur. The operative mortality approaches 25 percent. Temporary benefit has been reported following irradiation, probably depending upon the vascularity of the tumor.

Spongioblastoma polare is a rarer form of spongioglioma, usually found in the cerebellum of children. These tumors are less vascular and more slowly growing than the other types. The patients have survived longer and the average duration of symptoms has approximated four years. The tumors may occur in the region of the third ventricle, producing hydrocephalus. Microscopically the tumors contain unipolar and bipolar spongioblasts, whose tail-like expansions run to a great distance. The nuclei are round in cross-section, but otherwise elongated. Multinucleated cells are occasionally found, but mitoses are rare. These cells rarely show sucker feet attached to blood vessels. When they do, the tumor is then tending more towards an astroblastoma.

Astroglioma or Astrocytoma: The astrocytomas are the most differentiated of the gliomas and among the most frequent of brain tumors. They are the most favorable type of glioma from the standpoint of curability. The fibrillary type of astrocytoma, which is composed of cells with a small nucleus and numerous thread-like processes (astrocytes), occurs in the subcortical region in the cerebrum of adults or the cerebellum of children. The protoplasmic astrocytoma, a rare form, contains ganglion-like cells and occurs usually in the cortex. As a rule the tumors grow slowly over a period of years, producing signs of gradually increasing intracranial pressure. The growth of the tumor may become stationary and the main mass of the

neoplasm often undergoes cystic degeneration. Operative removal of these growths is frequently successful but recurrences may take place and the operative mortality averages about 15 percent in the best hands. The fibrillary astrocytomas contain astrocytes, the small bodies of the cells being widely separated by the fibrillary processes, which can be stained with gold sublimate. Multinucleated cells and mitotic figures are extremely rare. Calcification is common.

Rare Forms of Glioma: Rare forms of glioma include astroblastoma, oligodendroglioma and ependymoglioma.

Astroblastoma is an undifferentiated form of astroglioma which arises from a cell transitional between spongioblast and astrocyte. It is a rare tumor found in adults and grossly resembling astrocytoma. The histologic criterion for this group is the occurrence of elongated cells with "sucker" feet attached to the walls of blood vessels.

Oligodendroglioma is a rare and very slowly growing neoplasm with a tendency to form calcareous deposits. It is a solid tumor and usually occurs in the cerebrum, where it may grow to large size. Microscopically, the tumors are composed of small round cells with scanty cytoplasm and small, spherical, dark nuclei. They are separated by a scant, delicate fibrillary material. This scarcity of cellular prolongations characterizes the tumor cells, hence the name oligodendroglioma. Calcification of blood vessels is often a conspicuous histologic feature.

Ependymomas are more common in the spinal cord than in the brain. In the cord they arise from the central canal and in the brain from the roof of the fourth ventricle, from the lateral ventricles, and often from the aqueduct of Sylvius. Because of their location in the walls of the ventricles, they can be accurately localized by ventriculography. They are usually small, firm, encapsulated tumors derived from the ependymal lining, but some may grow large and infiltrate the surrounding nervous tissue. Tumors in the wall of the third ventricle produce hydrocephalus; in the lateral ventricles, convulsions, hemiplegia or aphasia. Operative removal is usually successful, for the tumors are often attached only by a pedicle.

The cells of the ependymoma closely resemble primitive spongioblasts, having an abundant granular cytoplasm, sharp cell boundaries, an oval nucleus with scattered chromatin, and one thick process of varying length, which ends on the wall of the blood vessel. They radiate about blood vessels and may form pseudo-rosettes. A papillary or adenomatous-like arrangement of the cells may be seen.

Sheath Tumors of the Central Nervous System

Acoustic Neurinomas (cerebellopontine angle tumors). Tumors occupying the cerebellopontine angle comprise about 10 percent of all intracranial neoplasms. In the present series there were 105 cases in this location. Seventy (70) of this group were histologically neurinomas involving the sheath of the eighth nerve. The remainder were meningeal tumors or gliomas arising at the cerebellopontine angle.

Sheath tumors of the acoustic nerve occur in adults. The duration of symptoms is prolonged, often extending beyond a five-year period. The characteristic syndrome begins with roaring in the ears or dizziness, followed by deafness on the affected side. Involvement of the neighboring nerves and cerebellum produces changes in sensation on the affected side of the face and in the anterior two-thirds of the tongue. The voice becomes thick, the patient ataxic. Signs of intracranial pressure ensue.

Grossly these tumors are encapsulated, and vary in size from one to several centimeters in diameter. They are found beneath the cerebellum at the root of the eighth nerve. Histologically, there is marked fibrosis and bands of collagen interspersed with nuclei arranged in a parallel fashion (so-called palisading). Dandy prefers complete enucleation of the tumor, including the capsule, whereas Cushing is content with intracapsular enucleation, awaiting recurrence before radical removal. Paralysis of the facial nerve follows surgery for these lesions, and anastomosis is performed, at a second stage, between the peripheral portion of the seventh nerve and the central portion of the eleventh.

Spinal Neurinomas: Palisaded neurinomas occur in the spinal cord in an extramedullary location. They may be intradural or extradural and occur on the roots of the spinal nerves within the vertebral canal, anywhere from the cervical region to the cauda equina. They are sometimes multiple and associated with von Recklinghausen's disease. The symptoms produced vary with the level of the tumor. Root pains, girdle pains, weakness of the legs, progressive paralysis below the painful area, and disturbance of the bladder and rectal functions, are common findings. Diagnosis is aided by the injection of Lipiodol in the subarachnoid space above the lesion, and roentgenographic demonstration of a "block."

Tumors of the cauda equina present certain diagnosis difficulties. The majority of tumors in this region are sheath tumors. The pain, which may be very prolonged, is frequently attributed to arthritis or sciatica. There is flaccid paralysis with loss of reflexes and disturbance of the bladder and rectal

functions. An area of "saddle" anesthesia is present in the perineum. The exposure of these tumors is difficult but the prognosis is good. The distribution of these sheath tumors in the spinal cord and in the cauda equina is as follows:

Cervical region	6 cases
Thoracic region	7 cases
Lumbar region	2 cases
Cauda equina	10 cases
Total	25 cases

Meningeal Tumors: About one-sixth of the intracranial tumors arise from the meninges of the brain or cord. In this series of 98, ten (10) developed in the spinal meninges. The locations were as follows:

Frontal region	30
Region of falx	18
Temporal & middle fossa	15
Spinal meninges	10
Pontine angle	7
Parietal region	4
Occipital region	4
Suprasellar region	4
Sphenoidal region	4
Multiple	2

Meningeal tumors affect adults and are of slow growth. The youngest patient in our series was fourteen years of age; the oldest was sixty-two. The average duration between the onset of symptoms and the operation was two and one-half years. Many gave a history of five years or more. The common site for the development of such tumors is in the parasagittal regions. The falx and the meninges of the middle fossa are other frequent sites. These are favorable tumors from the standpoint of operative removal.

Changes in the cranial bones may be produced. These changes may be of diagnostic significance. The increased vascularity caused by the tumor may produce markings in the skull. Demarcated areas of bone resorption or centers of calcification are sometimes noted. In about ten percent of the cases, cranial osteophytes or hyperostoses are produced by the invasion of the bone overlying the tumor.

Bailey and Bucy have described nine types of meningeal tumors such as those under discussion. The histology of our cases is fairly constant. They are either epithelial or fibroepithelial in character, the cells being arranged in whorls or islands, often about small calcified bodies or corpora amylacea.

Tumors of Appendages of the Brain: Tumors may affect the choroid plexuses, the pineal or the pituitary gland. Tumors of the pineal and pituitary glands are excluded from the present discussion since they are described in connection with the endocrine organs.

Tumors of the choroid plexus are extremely rare. They are encapsulated tumors which are usually cystic in character, found in the lateral or third ventricles of children and readily visualized with the ventriculogram. Microscopically they are papillary polycystic or cystic lesions, covered with low cuboidal epithelium. These growths are closely related to ependymomas and are favorable from the standpoint of extirpation. Cholesteatomas or epidermoid cysts have been described in the choroid plexus.

Tumors of the Eye

Tumors of the eye comprise three main groups: (1) Those involving the lids and surface; (2) those invading the orbit; and (3) those affecting the retina, optic nerve or uveal tract. Only those in the third group are predominantly neurogenic. Those of the eyelid are epithelial as a rule (basal- or squamous-cell neoplasms), and those of the orbit arise from the lacrymal glands, blood vessels and bone or are secondary to carcinoma invading this region from the pituitary or antrum, or metastasizing here from elsewhere in the body.

Tumors of the Retina (Retinoblastoma): Tumors of the retina are sometimes referred to as gliomas but they are usually neuroblastic, so that a better term is retinoblastoma. These growths occur in children, producing exophthalmos and blindness, and rapidly invade the orbit or metastasize to the lymph nodes, liver and other distant organs. They are often congenital or familial and are usually rapidly fatal, although in some cases slow progression is observed. Early removal of the eye, with thorough cauterization of the socket, offers the only possibility of cure. Histologically, these tumors resemble the medulloblastomas of the cerebellum. The cells are small and superficially resemble lymphocytes, but they have definite fibrillae and form typical rosettes.

Undifferentiated retinoblastomas, known as neuroepitheliomas or medullo-epitheliomas, may involve the retina. Another form of retinal tumor is a primitive angioma, which may be associated with vascular tumors of the brain (von Hippel's disease).

Choroidal Melanomas: The most frequent tumors of the choroid structure are melanomas. Many of the spindle-cell sarcomas of the choroid without pigment belong to this group. The tumor may occur near the fundus or in the iris and may arise anywhere in the uveal tract. In the fundus, the lesion forms a raised, pigmented spot, which may be seen with the ophthalmoscope. In some instances the tumor is benign, but in the majority of cases where symptoms arise, the tumor has undergone malignant change. Blindness and extension to the sclera or the orbit, with metastases to the regional lymph

nodes and liver, occur as the growth advances. The only successful treatment is enucleation of the eye in the benign or early malignant stages. The lesions are not radiosensitive.

Choroidal melanomas contain elongated malignant spindle cells, interspersed with large stellae chromatophores. Sometimes the growth has a more epithelial appearance. While non-pigmented forms occur, the usual melanoma of the choroid is heavily pigmented.

Choroidal Neurofibroma or Plexiform Neuroma: Benign and malignant nerve-sheath tumors may occur in the choroid. They are spindle-cell growths with intercellular myxomatous areas and with occasional palisading of the nuclei. The lesions may be associated with von Recklinghausen's neurofibromatosis. The plexiform neurofibroma of the choroid is a rare congenital lesion which leads to thickening of the choroid, usually near the point where the ciliary nerves enter. Glaucomas and exophthalmos are associated with the lesion, which remains benign and may be cured by enucleation.

Tumors of the Optic Nerve: A rare form of glioma may arise in the sheath of the optic nerve. Although congenital in origin, symptoms are rarely observed until adolescence. There is progressive failure of vision, exophthalmos, and optic atrophy. Usually the tumor is not diagnosed until the eye is rendered useless and total enucleation has been performed. Histologically, the tumor is composed of a mixture of astrocytes and spongioblasts, resembling astrocytomas of the brain.

(To be Concluded)

The Industrial Aspect of Hernias

(With a Classification and Descriptions)

By Russell A. Winters, M.D., Chicago

CONTROVERSY is the essence of progress. In the hernia field, discussions relative to the medico-legal aspect of hernias and about the efficacy of the injection method are creating a large amount of interest. This is not surprising, since approximately one out of every seven individuals has some type of hernia, and this field is one of the most important, from an insurance angle.

In order to have a clearer concept of hernias, it is advisable for the surgeons to study their pathologic findings at operation and render an indispensable aid to the medical profession by tabulating their findings as to congenital predisposition and traumatic aggravation. The industrial commissions have held that the operating surgeon is best able to determine responsibility in the acquiring of hernias, and as a result most of their findings have been against the industrial interests. The outcome naturally has been a gradual alteration, in removing the responsibility from the employer's shoulders and placing it on the individual's, based on congenital predisposition and on the fact that the worker has sixteen hours at home, against eight hours at work, for acquiring a traumatic aggravation. This move has met with considerable disfavor among the medical profession, due to erroneous concepts relative to congenital predisposition and traumatic aggravation.

The ensuing outline is offered in the hope that other surgeons will advance surgical statistics that will either approve or disprove the present industrial attitude. The ornithologists maintain that everybody has seen an English sparrow, but that few can describe its build and markings. Likewise, many thousands of surgeons have seen hernias, but few have analyzed their operative findings or kept statistical data. A preponderance of hernias in the male are of the indirect inguinal type, so that the major portion of the ensuing outline will deal with this type.

Indirect Inguinal Hernia

An indirect inguinal hernia is the passing of part of the intestines, mesentery, omentum, or a combination of these to the inguinal region, by way of the inguinal canal, passing lateral to the deep epigastric artery.

Classification

I.—*Congenital,* resulting from an incomplete clearing up of the tunica vaginalis testis after the descent of the testicle, during the seventh and the eighth months of fetal life.

1.—*Infantile,* in which a definite hernia descends posterior to the congenital sac.

II.—*Acquired*

1.—Acutely acquired, due to:

A.—A *poking or pointed injury* from the outside, applied directly to the inguinal canal structures, especially those of the internal ring.

B.—*Increased intra-abdominal pressure,* due to external force or injury to the abdomen, causing increased pressure, or to

C.—*Fixation of the abdominal musculature,* with increased pressure produced by the forcing down of the diaphragm,

as in coughing, straining at the stool, lifting, etc.

2.—Gradually acquired due to:

A.—*Weakness or relaxation* of the internal ring, with a continuous intestinal barrage against it, or to

B.—*Congenital predisposition* to a hernia by way of the

a.—*Parietal peritoneal shelf over the deep epigastric artery,* forming a fulcrum for assault against the internal ring.

b.—*Congenital weakness of the wall* at the internal ring, due to an undemonstrable processus vaginalis pocket.

c.—*Plica vesicularis*—a fold of peritoneum extending over the bladder and passing beneath the internal rings, supporting this persistent localized traumatizing action.

d.—*Obliterated hypogastric artery,* persisting to form a direct hernia pocket with an associated predisposition to indirect hernia.

Anatomic Structures Involved

I.—*The internal ring* is, theoretically, located ½ inch above the inguinal ligament, midway between the anterior superior spine of the ilium and the spine of the pubis. It is an oval opening in the transversalis abdominis muscle fascia, formed by a prolongation of this fascia around the cord in a funnel-shaped manner and passing between the fibers of the muscle.

II.—*The inguinal canal* is about 1½ inches long, passing consecutively through the three intersupporting muscles, the innermost portion passes through the fibers of the transversalis abdominis muscle, whose fibers run transversely across the abdomen. At the internal ring the supporting sheath is the internal oblique muscle, external oblique muscle, fat, fascia, and skin; the middle portion passes between the fibers of the internal oblique muscle, whose fibers pass downward and outward from the rectus abdominis muscle; and the outer portion penetrates the external oblique muscle, the fibers of which pass upwards and outwards from the rectus abdominis muscle, forming an angle of 45 degrees with the transversalis abdominis muscle.

III.—*The external ring* is a triangular opening in the aponeurosis of the external oblique muscle, situated just below and external to the crest of the pubis. Normally it is about ½ inch wide and 1 inch long. The *spermatic fascia* of the external ring is composed of a group of tendinous fibers which arch across the lower part of the external oblique aponeurosis, between the pillars of the external ring. These are connected together and continue downwards in a tubular prolongation enclosing the cord and the testis in a definite sheath. This sheath, formed by the external oblique muscle, is known as the cremasteric muscle.

IV.—*Congenital Abnormalities* include the processus vaginalis, a sac left following the descent of the testicle and tunica vaginalis, which may persist in any degree, from a slight invagination at the internal ring to a definite sacculation which may extend down the inguinal canal to any lower level, occasionally uniting with the spermatic fascia and enclosing the testicle.

The location of a congenital hernia is most frequently on the right side and is usually associated with a hernia of less degree, or a relaxed ring, on the left side.

Relaxed external rings predispose to hernias, because the transverse abdominal muscle is pushed against a larger opening, causing it to be thinned out at this point and producing a muscular bulging, or causing the thinned muscle fibers to separate, permitting the passage of intestines or omentum.

Relaxation of the inguinal canal muscles, occurring when the patient is in a sitting, lifting, or bent-over position, also contributes to the formation of hernias.

Pain in Hernias

I.—*Pain in acutely acquired hernia* would be *instantaneous and intense,* because

1.—*The peritoneal sac* is pushed through the internal ring and traumatized. (Peritoneum is extremely sensitive, as are all tissues guarding the vital structures, such as the pleura, pericardium, tendon sheaths, etc. The degree of sensitivity is directly proportional to the importance of the structures protected. Nausea or vomiting may result from this irritation or from the intestinal inclusion.)

2.—The *fascia around the internal ring* opening and along the cord is torn loose, permitting the passage of the sac.

3.—*The muscle fibers* of the three intersupporting muscle layers are torn apart in the three different planes.

4.—*The fascia at external ring* is torn through, in order to permit the passage of the sac.

5.—*Inclusion of the sac and its contents* in the constricting traumatized structures retards its circulation. Associated discomfort may persist for over two weeks, because muscle requires two or three weeks for normal repair and the cessation of tenderness. *Reduction and recurrence* of hernia, due to manipulations or changes in positions, produce a constant irritation, which retards the normal "resting tissue repair time," prolonging the tenderness to six or eight weeks or more. Pain *radiates from the inguinal canal down the groin,* if a nerve is involved.

II.—*Gradually acquired hernia* may have

1.—*No pain with it,* because the deep epigastric artery lies between the transversalis fascia and the peritoneum, passing obliquely upward and inward along the lower margin of the internal ring, with its "mesoarterial" sheath forming a pocket just below the internal ring, which supports a continuous intestinal onslaught against the ring. The gradual enlarging of the ring and canal structures might go unnoticed or be evidenced by *occasional discomfort* when

A.—*An abnormally large loop* of intestines replaced the smaller one that has been persistently present. This seeming anesthesia to trauma results from a continuous pressure and can be correlated with the gradual stretching of the lips in the Ubangi woman in Africa without much physical discomfort.

B.—*Incomplete traumatic hernia* of old standing would come under this classification; also enlarging over a period of time, without much physical discomfort. When pain is present in such cases, it indicates the passage of an abnormally large sac content; but the pain does not persist and there is very little tissue trauma associated with its presence, since the stretching of the tissues has been progressing over a variable period.

Congenital hernia would produce no pain if the condition has not changed since birth; or *occasional discomfort,* as in a gradually acquired hernia.

Condition of the Sac

Normal peritoneum forming the sac suggests a comparatively recent affair, or an older condition in which the small sac has been permitted to pass through a large ring without any associated irritation. Peritoneum is not normally attached to the abdominal wall and should not be altered on being pushed through the ring.

Thickened peritoneum forming the sac suggests an old affair, in which a series of passages through a comparatively tight ring have produced a chronic irritation with thickening.

Thinned peritoneum forming the sac suggests either

I.—*Adhesions of the peritoneum* at the internal ring or in the canal, preventing the addition of more peritoneum as the size of the sac is increased by pressure and a natural enlargement of the sac results from the hernia content pressure, or

II.—*Congenital processus vaginalis,* evidencing itself by hernia formation, its walls being adherent to the inguinal canal and thinned out as in the above case and its development being retarded by lack of use until hernial contents are introduced.

A sac, present but not palpable, may occur where the sac is adherent to the walls of the canal and the contents of the hernia are retained within the abdominal cavity by a temporary valve-like action of the fibers of the transversalis abdominis muscle, or a fold of peritoneum acting as a valve. This explains some complete or incomplete hernias that are not found on physical examination, although they may be demonstrated several days later.

The relation of the sac to the cord is important. If it is posterior to the cord, it indicates a congenital affair, since the testicle and tunica vaginalis descend posterior to the cord, leaving any persistent processus vaginalis in that location.

The degree of herniation permits a relative differential classification into: (1) *Incomplete hernia,* in which the smooth sac, which gives an impulse on coughing or straining, is palpable in the external ring, but does not form a hemispherical bulge; and (2) *complete hernia,* indicated by the same general condition, but in which the sac forms an arc of 180 degrees or more.

Fluid in the sac may be divided into: (1) *Clear fluid,* which is a normal content, since all closed cavities supporting vital structures have a fluid secretion; or (2) *bloody fluid* or other abnormal content, indicating either a pathologic condition in the abdominal organs draining into the sac, or trauma to the cord by careless operative manipulations. (*Trauma to tissues in the passage of a hernia* would produce blood *external to the sac,* which would be found as clots in the canal.)

Hernia produced by digital examination would react the same as an acutely acquired hernia, since the same structures would be traumatized and an active hernia would result. *Complete hernia* may be produced by digital manipulations traumatizing the supporting structures of an incomplete or potential inguinal hernia. The pain would be proportional to the number of structures injured and to the extent of the injury.

It is the duty of surgeons to clear up any controversy in this field by keeping operative data, showing that the industrial attitude is or is not well founded, if this subject is approached from a congenital predisposition angle.

5 N. Wabash Ave.

LEARNING

Learning is a great rehabilitator; it thrusts back horizons and accelerates all the powers of life to an intenser beat.—HENRY MORTON ROBINSON, in *Reader's Digest.*

A School for the Aged

By W. A. McKeever, A.M., Ph.M., LL.D., Oklahoma City, Okla.
Formerly Head of Child Welfare Department, University of Kansas

IN Oklahoma City, I have built up an organization of nearly 1000 men and women, all above 70 years of age and some of them over 100. Here, through class recitation, house-to-house calls and printed circulars, I am conducting a regular school of instruction, featuring the peculiar needs and requirements of such aged persons. "The School of Maturates" is the name I have given the institution. Childhood association with my grandparents gave me a love complex for what we have been calling "old people," which to this day has strangely affected my life. More than 20 years ago, while professor of philosophy at the Kansas State College, I conducted an experimental class of 35, all over 80 years old, and was astonished and delighted at the response of the members. Three years ago I started the Oklahoma City movement, and was again rewarded with inspirational results.

A School, not a Club

All along, the emphasis has been placed on the idea of a *school*—a coming together of class groups, where the members may recite on stated projects and problems and give personal testimony as to their behavior, as well as affect an interchange of ideas of self-improvement. Without any outside funds, without a fixed place for the regular monthly assemblies, and with many other lacks and handicaps, I have managed to keep the school going with very satisfactory results.

The policy from the beginning has been to insist on a regular program of guidance, self-help, and inspiration for the members. Lacking the advantages of a school building, we have had to use church auditoriums and assembly rooms for our class exercises. These the churches of Oklahoma City have generously donated. Since the members of the school pay no fees or dues, I work without salary and manage the finances by private means at my disposal. It is certainly an inspiration to see the aged men and women come romping out to attend the class assemblies and to have them eagerly take their turns reciting. Sometimes a score or more will respond at a given class meeting. Our programs are not all didactic, half of the assembly time being given to readings, music, story-telling—and old fashioned "literary society" entertainment—and how they enjoy it!

A Ten-Point Course of Study

Having been, throughout my professional life, a teacher—in public school, college, and university—I hold to the practice of educational methods. These are some of our ideals:

To make life, after seventy, more cheerful, more interesting, more indoctrinated with living ideals.

To make it possible for aged persons to get together, for mutual acquaintance and mutual helpfulness.

To try to avoid the loneliness, excludedness, mental dullness, and spiritual poverty of men and women traditionally classified as "old folks."

To induce the aged members actively to seek means of better physical well-being, quickened mentality, more extended sociability, and enriched spiritual understanding.

"Something interesting for every member to do," is our watchword. Following, roughly stated, are the ten divisions of our curriculum, all aiming at practical improvement in everyday living:

1.—*Diet:* Pursue a course of extreme moderation in the use of rich and, especially, acid-bearing foods, with emphasis on fruits and vegetables—the laxative alkaline foods.

2.—*Elimination:* A studied effort to use only such foods as will maintain regular, active elimination of poison wastes from the body as fast as they are formed.

3.—*Industry:* Pursue some light employment or have a hobby—some project sufficient to entice permanent interest and to furnish some measure of physical exercise.

4.—*Amusement:* Adhere to the practice of getting some fun out of life—simple games, interest in sports, attendance at lectures, theatres, reading humorous literature.

5.—*Exercise:* Get out daily in the sun and air, without regard to the weather conditions—walking, auto riding, outside employment—avoiding the habit of fear of braving the storm.

6.—*Current Events:* Keep in touch with the daily news, with current events, political changes, national and international affairs that make and re-make human history.

7.—*Friendship:* Cultivate systematically the spirit of friendliness, aiming to make contacts outside the immediate family circle and preserving the habit of sociability.

8.—*Complaining:* Avoid complaining, fault finding, decrying the degeneracy of the times, and the old-age habit of brooding over the passing of a bygone era of happiness.

9.—*Religion:* Have some kind of regular connection with the church and its members and affiliates—membership, Bible study, social service under some church body.

10.—*Philosophy:* Cultivate an optimistic philosophy of life, by reflecting cheerfully on world progress, higher spiritual values, a hopeful outlook on a possible immortality.

It has long been my conviction, based on ample experience, that drug medication has very little to offer the aged, but that physiologic therapeutics is their greatest requirement. I caution my medical friends that they too often overlook the great need of the aged for definite prescriptions of diet regimens, suited to preserve strength of body and mind, to keep the organs of elimination active, to preserve a serenity of spirit. There is a distinct demand among our aged friends for this kind of professional service.

As I have learned to know intimately the life behavior of hundreds of men and women past seventy, I do not recognize any such thing as a socalled natural old age death. I see them dying of overeating, faulty elimination, lack of something to do, loneliness, and the like, just as younger persons would die, were they so neglected, mistreated, misunderstood, and abandoned.

The Most Neglected Class

The aged are by far our most neglected class of citizens. We do not recognize the fact that they need a peculiar diet regimen, a peculiar form of employment, a peculiar management of their social relations, a peculiar, new, forward-looking program for the guidance of their after-years. And, not recognizing this tremendous need, we fail utterly to meet it with constructive, directive programs.

Neither physical pain, chronic illness, mental weakness, senility, nor similar disabilities are natural accompaniments of advancing age. On the other hand I assert that these drooping, dwindling, dulling features of late life as we know it are practically all avoidable, and that by the use of some very simple measures of care, guidance, and inspiration.

Some day the traditional cloud of gloom will be lifted from our dear aged friends, and then we shall see them walking, working, *living happily* among us, not one centenarian in 100,000 or more of the population, but many sprightly men and women who are well past the century mark. But before that comes to pass we shall have to see a radical change of the public mind—a breaking up of many false and destructive traditions about "old age" and its natural status.

Up to their dying day, if they are well and free from pain and sorrow, the aged are fully capacitated for getting all the joy, beauty, sublimity and other higher values out of life, of which we of the younger generation are capable. I sometimes think that their capacity for living radiantly is even greater than ours, for they interpret life spiritually, while we interpret it materially; "For the things which are seen are temporal, but the things which are not seen are eternal."

It is a sort of pledge of mine, that I must devote as much of my life as possibly can be spared to the service of the aged. I especially want to see the School-of-Maturates program spread throughout the entire country, with branches in churches, schools, and communities, until those in all the "grandparent class" shall be given the rights, privileges and opportunities which they have been so long denied.

State Capitol Station.

WHERE DID IT COME FROM?

The federal government produces nothing. It gets the money it requires either through taxation, confiscation or borrowing. If the Government needs a billion dollars, it goes to the banks with suitably engraved pieces of paper promising to repay the banks a billion dollars at some future date, and the banks deposit a billion dollars in cash to the credit of the U. S. Treasury, against which it can draw checks.

In printing a billion dollars of promises to pay, the Government has created no new wealth. Nothing has been produced but a debt, which must eventually be repaid by direct and indirect taxation of all consumers in the nation. The billion dollars credited to the Government's account are dollars which represent the savings of the people. Nevertheless, when the Government passes out this money in doles to relief workers, contractors, etc., it becomes a billion new dollar bills, but the wealth of the country has not been increased one iota. In other words, the percentage of dollars to real wealth is constantly increasing, and it does not require the brain of a learned economist or astrologist to figure out what that's doing to the dollars in your pocket.—Clover Business Service.

TIME FOR ACTION

When there is a deliberate and obvious purpose to deceive the rank and file of the American people solely for political purposes, it is time to strike out straight from the shoulder, no matter whom or where it hits.—CARL P. DENNETT.

PHYSICAL AND OFFICE THERAPY AND RADIOLOGY

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Incorporating

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FOR OFFICE THERAPY

RUSSELL A. WINTERS, M.D.

Office and Home Treatment

WITH this issue of CLINICAL MEDICINE AND SURGERY, the *American Journal of Physical and Ambulant Therapy*, which for a number of years has been cultivating the large and important field of the various methods of treatment (including dietetics) which do not require that the patient be put to bed, and hence may be carried out in the office or in the home, becomes an integral part of this Department, the title of which is made more inclusive, and its Editor, Dr. Russell A. Winters, becomes a member of our Editorial Staff, to be in special charge of the section dealing with ambulant or office methods of treatment.

Various studies have shown that the basis of the recent outcry against the high costs of medical care rests largely upon the great expense entailed by hospitalization of the patient. It would appear that the present generation of the members of the medical profession, most of whom have been largely trained in hospitals, have lost some measure of the stamina and self-reliance which formerly characterized the sons of Imhotep, and have developed a tendency to send their patients to hospitals on the least provocation, thus making the doctor's work easier and relieving him of part of his responsibility, but also placing an unduly heavy financial burden upon the patient.

If the medical men of the United States are to retain their individuality and personal relationships with their patients, and avoid the disaster of regimentation under some form of State Medicine, they must demonstrate their ability to give the vast majority of their patients adequate and skillful attention, without subjecting them to the frequently ruinous expense of hospital care.

Such a demonstration *can be made*, if a sufficient number of physicians will undertake the study and work which are necessary to fit them for doing, in the office or the home, many of the things which are now done, in different ways, almost exclusively in hospitals. This includes most of the physical methods of treatment, by various electrical agencies, radiant energy, simple hydrotherapy, massage, exercise, etc.; the injection methods of treating varicose veins, hemorrhoids, hydrocele, and hernia; the use of various medicaments for systemic effects by parenteral (injection) methods; the intelligent care of disorders of the feet; the practice of scientific dietetics; and a number of other matters.

We hope and believe that this reenforced

Department of *Physical and Office Therapy and Radiology* can and will become a real, constructive force in the professional lives of our readers, and we solicit their suggestions and active cooperation in making it so.

GEORGE B. LAKE, M.D.

Physical Therapy Research

EVERY now and then we hear protests against the enormous amount of time and money expended in research work, which, the critics declare, is badly overdone. The protest is chiefly from the economic standpoint, but the argument is, of course, that the results from the standpoint of treating and preventing disease are absurdly small in proportion to the money and energy expended, and to the importance which is attached to the matter. It is admitted that a vast mass of information has been accumulated, but it is contended that the net profit is a minimal quantity, so far as the patient is concerned, and a warning is sounded against the seductive idea that the profession can acquire, by a short-cut through the laboratories, what is only to be gained through the long road of clinical experience.

While there is a good deal in this contention, however much it may apply to medicine in general, we should be disposed to hesitate to discourage research work in physical therapy. On the contrary, we should be inclined to say that careful research work is precisely the thing of which physical therapy now stands most urgently in need. Not that such work has been wholly neglected. A great deal of it has been and still is being done, and of the very highest order, all of which we gratefully acknowledge and heartily commend, but most of it has been accomplished by the physicists, on the one hand, and by people who design and manufacture physical therapy equipment, on the other hand, to both of whom we acknowledge our indebtedness.

But the character of the research needed most of all in physical therapy is *clinical* research, which seems to have been largely eclipsed and abandoned in the enthusiasm for laboratory research. What is needed just now is a renaissance of clinical research—the application of laboratory methods to clinical work, and the cooperation of the practitioner in that work. Physical therapy is in the making, as an applied science, attended, as yet, with plenty of uncertainty and confusion in its clinical aspects. The only way to bring order out of the chaos is for every one who practices physical modes of therapy to constitute himself a clinical research man, surveying, observing, and reporting, with accuracy and judicial conservatism, upon the technic and results of his work.

RUSSELL A. WINTERS, M.D.

Hyperpyrexia by Means of Conductive Heat

By V. D. Keiser, A.B., M.D., Indianapolis, Ind.

THE use of heat in the treatment of disease is as old as the art of medicine itself. The writings of Galen and Hippocrates refer to heat as a remedial agent. But it was Rosenbloom, in 1860, and later Wagner von Jauregg, in 1887, who first called particular attention to the therapeutic possibilities of fever itself in the treatment of disease. Von Jauregg first injected tuberculin, and later typhoid vaccine, in order to produce fever artificially. However, he finally "came to the conclusion that the actual presence of an infectious disease was required for the best therapeutic results, and accordingly, in 1917, he took up the inoculation of paretics with tertian malaria."[1]

The last few years have given us a tremendous accumulation of experience in the use of malarial hyperpyrexia. The profession is particularly indebted to Dr. Max Bahr[2] and Dr. Walter Bruetsch[3], of the Central Hospital for the Insane, for advance in this field. But we have learned that malarial treatment is not without its hazards. After a study of the literature, in an attempt to arrive at an idea as to the mortality rate of malarial therapy, Stokes[4] remarks: "The tendency seems to be to attribute fatalities in malarial treatment to the paresis rather than to the malarial infection." And I grant you that, in a given case of paresis that has died during the course of malarial treatment, it probably is hard for the pathologist at postmortem, frankly and without bias, to say definitely whether the patient died as the result of the paresis, or as the result of the malarial therapy. Dr. Bahr, Dr. Bruetsch, and others, have become expert in their use of malaria, and theirs is becoming a lower mortality rate, but they do have fatalities—and, to complete the story, they do have many spectacular cures.

Von Jauregg undoubtedly had the conception that the beneficial effects of malaria were largely due to the induced fever. "This idea is supported by the general opinion of ob-

servers that good results (from malaria) are proportionate to the height reached by the fever paroxysms in the individual case."[5] This hypothesis and this observation have resulted in the various physical agents being used to produce fever artificially. The desideratum has always been pure fever—fever with no by-products or adulterations; pure physiologic fever. It has always been the hope that such fever, produced artificially, but without the antecedent production of a disease process, would be a safer and a more rational addition to the armamentarium of the medical profession.

Hydrotherapy

To this end, many varieties of hydrotherapy have come into use, all variations of the simple procedure of immersing the patient in hot water. However, such procedures have some very real dangers. Hot baths, continued long enough at a bath temperature of 110° F., will unquestionably produce fever of some 103 degrees. But, all too frequently, the patient dies. A little reflection shows us why. Immersion of the patient in hot water for a considerable time interferes with the gaseous interchange between the skin and the surrounding air. This breathing function of the skin is a requisite of life, as is shown by the sudden death that follows coating the entire skin with shellac or the like. Long immersion in water has been followed by sudden death, undoubtedly as a result of this interference with the breathing function of the skin. Consequently, the artificial production of fever by means of hot baths has been proved impractical.

Electrical Methods

The fertile minds of the scientific world next took advantage of the fact that the passage of a high-frequency current through the body of the patient results in the production of heat within the tissues. Much experimentation has been done along this line of research, and, as far as the production of fever is concerned, their efforts have been entirely successful. This method of producing artificial fever is known as diathermic hyperpyrexia.

However, aside from the elaborateness of the apparatus and its resulting high cost, there have always been certain drawbacks to diathermy as a method of producing fever artificially. Troublesome sparking between the electrodes and the patient has resulted in some very unpleasant burns. Neymann[6], in a relatively recent article, states that by this method a certain number of burns is unavoidable. Further, the electric chair of penal institutions, passing current through the body of its victim, and the diathermy machine, which passes current through the body of the patient, have too much of a similarity, to the layman, for a pleasing psychologic reaction on the part of the patient. However, although diathermic hyperpyrexia is in no sense the desideratum, yet, in justice to diathermy, it has produced some very gratifying results, and the work with diathermy has, to a great extent, guided us in our work in the production of hyperpyrexia by means of conductive heat.

Conductive Heat

Our wives have long been using a principle, in the form of the ordinary electric flat-iron, which, it seemed, could be used in the production of artificial fever. All that seemed necessary was the incorporation of electric resistance wires in suitable long, flexible applicators, and certain apparatus for the control of the input of electrical energy. It seemed reasonable that, with such applicators covering a large portion of the body surface, and with the patient enveloped in suitable blankets or the like, and with the input of the electrical energy properly controlled, the following results, in all likelihood, would ensue:

1.—The patient's body temperature would rise as the result of the physical absorption of heat from the applicators.

2.—This heat would be carried to all parts of the body by means of the heated circulating blood.

3.—Since the surface covered by the applicators is to be large, the actual temperature of the applicators need not be excessive, but rather comparatively low, and yet a relatively large number of heat units could be delivered to the body.

4.—There would be added to the body nothing but heat—no foreign protein, no bacteria, and certainly no new disease process.

5.—There would be no current passing through the patient, and hence, no unknown electrical effects upon the tissues. The patient would be completely insulated from the current at all times.

6.—There would be no interference with the normal sweating or the gaseous interchange between the skin and the air.

7.—Since we could control with great certainty the input of electrical energy, it was reasonable to assume that we could control the fever produced with equal certainty.

8.—In a word, it was hoped that such an apparatus would produce pure, unaltered, controllable hyperpyrexia.

The first actual use of the completed apparatus was made in my own office. It was really somewhat to my surprise that the patient's mouth temperature actually did rise to 103° F. within a period of a little more than two hours. Having the fear of the unknown before me, I turned off the machine at this point, and, with great satisfaction, saw

his temperature drop to normal again. I had demonstrated that this apparatus would actually produce fever.

Our next problem was to try out this apparatus on actual cases. We wanted to stay on the beaten path as much as we could, and accordingly, we chose to try it out on paretics. We obtained permission from Mr. Harry Barrett, Superintendent of the Marion County Hospital for the Incurable Insane, to use our apparatus on certain paretics in his institution, after he, Mr. Barrett, had obtained the proper permission from the patient's relatives. We wish herewith to express our gratitude to Mr. Barrett and his staff for the kind cooperation that they extended us.

Physiologic Fever

When we used this apparatus on actual cases, we were pleased to note all the physiologic attributes of fever, both during the treatment and afterwards. Within a half-hour after the treatment was started, there was the gradual development of a sense of warmth over the entire body of the patient. Then there developed a noticeable flushing of the face, and the beginning of perspiration. Then came increased pulse rate (up to 150 or 160), quickening of respirations, profuse sweating, along with thirst, and, when the temperature was brought up to 105° F. or over, there was generally mild delirium. In no case did we see fit to use sodium amytal, nerve sedatives, or anesthetics. Most interesting of all, to us, was the fact that the next day following a treatment the patients often developed herpes labialis, and sometimes herpes about the rectum. This seemed to us evidence that some biologic change was taking place—a change certainly similar to that of ordinary fever. Herpes developed following treatments sufficiently frequently to make us believe that we, with our artificial fever, were mimicking, to an appreciable degree, the physiologic processes of the fever of disease.

Thermal Shock

These cases were all given from 6 to 8 degrees F. rise in temperature every day. If circumstances were such as to make daily treatments impossible, we sometimes gave treatments every other day, but we felt that we obtained our best results with daily treatments. No attempt was made to hold the peak temperature for more than a half-hour. After the treatment the patient was encouraged to use any measure he cared to, to cool off as quickly as possible. Some of them immediately got into a cold tub. The only measure that was interdicted was standing in a draft.

We early had the idea that it would be the sudden change in temperature, rather than a prolonged high temperature, that would be of most benefit to the patient. We had arrived at this conclusion from the following line of reasoning: Every laboratory worker knows that bacteria in the culture tube are often comparatively easily killed by s u d d e n changes in temperature. On the other hand, bacteria can be educated to grow luxuriantly at temperatures that were once far from their optimum growth temperatures, if only those changes in temperature are m a d e slowly. Typhoid bacteria can be trained to grow luxuriantly at room temperature by the simple expedient of taking the cultures out of the incubator for a longer and a longer period each day. The converse of this is also true; cultures that have always grown at incubator temperatures will often die out upon being left at room temperature overnight.

Applying these facts to our problem, we concluded that, instead of trying to "autoclave" our patients by holding them at a relatively high temperature for a long time, we would try to kill off the infection by means of a kind of "thermal shock"—sudden changes in temperature. Subsequent experience did seem to bear us out in this. We received the impression that we got just as much good out of the sudden cooling of our patients as we did out of the rise in temperature. In no case did we see the development of coryza or a respiratory infection—in fact, it seemed to be good treatment for coryza.

Case Reports

Case 1:—F. S. This patient was a male, age 29 years. According to commitment papers on file in the Marion County clerk's office under No. A70205, he was definitely demented, was profane, obscene, and delusional. He had syphilis and a positive blood Wassermann reaction. He had had malarial hyperpyrexia elsewhere, with no effect upon his mental status.

He was given 10 hyperpyrexia treatments by means of conductive heat, with a daily rise in temperature of from 6 to 8 degrees F. The mental change that took place was remarkable. His blood Wassermann reaction was reported negative by the Indiana State Board of Health, under date of April 6, 1933. He was paroled from the institution the following April 22.

Case 2:—W. J., aged 42 years. According to commitment papers No. A60822, he had suicidal tendencies, was apathetic at times, at times he required restraint, forced feeding was necessary often. He had a positive blood Wassermann reaction.

He was given 14 daily treatments by means of our apparatus. His mentality quickly approached normality. Under date of April 7, before he had any treatments, the Indiana State Board of Health had reported a four-plus Wassermann and a four-plus Klein reaction. Under date of April 28, after the fever treatments, the same laboratory reported a negative Wassermann and a negative Klein reaction. This patient was officially paroled

from the institution Oct. 1. However, he is still in the institution because he has no other place to go.

Case 3:—G. G., age 32. According to commitment papers No. A67296, he was suffering from a depressive psychosis, with delusions of persecution. He had syphilis and a positive blood Wassermann reaction.

He was given 10 hyperpyrexia treatments. Under date of April 11, the Indiana State Board of Health reported a negative blood Wassermann reaction in this case. His mental condition was so markedly improved that, on May 5, he was paroled from the institution.

Case 4:—M. D., age 33. According to commitment papers No. A69855, this woman was maniacal, had a mania for burning, was delusional, and required restraint. She had syphilis and a positive blood Wassermann reaction. This patient had had malarial treatment elsewhere, with no effect, either serologically or mentally. This case had the blood Wassermann test checked in my own laboratory, and a test, run according to the Kolmer quantitative technic, gave a four-plus reaction with as little as 0.025 cc. of serum.

She was given 14 fever treatments by means of conductive heat. Her mentality promptly improved. Her blood Wassermann reaction is still positive, but not so strongly so as it was before treatment. The Kolmer quantitative reaction in my laboratory now reads 32000, where it formerly was 44400. Her mentality is now to be considered normal. She is officially paroled from the institution now, but is waiting for a place to go. In the meantime, she is one of the best workers in the kitchen.

Case 5.—M. G. This young man was only 20 years of age. According to commitment papers No. A65471 he had suffered a complete change of personality. He was catatonic, disoriented, noncommunicative—a depressive psychosis.

This case was so pitiful that, although he had a negative Wassermann reaction and had never been classified as a paretic in any of his records, yet we felt that, if we could prevent this young man's being institutionalized for the rest of his life, we would be doing a great service to the patient as well as to society. Accordingly, we could not resist the temptation of trying our fever therapy on this case. We gave him 6 treatments, with a daily rise of from 6 to 8 degrees F. The change back to normal was striking from the first treatment on. He was paroled from the institution on June 8.

The next group of cases were treated at the Longview Hospital, Cincinnati, Ohio, and were chosen by Dr. J. F. Bateman, Acting Superintendent of this institution. The cases were all paretics. I have received a personal communication from Dr. Bateman granting me permission to report these cases. I do not have access to the histories of these patients, either before or after treatment, but Dr. Bateman has sent me the laboratory findings, and those in themselves are sufficiently interesting to report. Suffice it to say that there was mental improvement in all cases.

Case 6.—P. G. Previous blood Wassermann tests, done by the Ohio State Board of Health, were four-plus, and Kahn tests four-plus.

Hyperpyrexia by means of conductive heat was given from June 22 to June 26. Blood Wassermann tests from the same laboratory, under date of July 1, were negative, and the Kahn test was also negative.

Case 7.—Z. McC. Previous Wassermann tests, reported by the Ohio State Board of Health under date of June 8, showed Wassermann three-plus; Kahn four-plus.

Conductive-heat hyperpyrexia was given from June 16 to June 28. The Ohio State Board of Health reported negative Wassermann and Kahn tests under date of July 1.

Case 8.—V. R. A previous blood Wassermann test was four-plus, and Kahn test four-plus. This case had had a series of diathermic hyperpyrexia treatments, from September 9 to October 22, in 1931. Those treatments had resulted in no improvement in this case, either mentally or serologically. The serologic report on Nov. 4, 1931, after her diathermic hyperpyrexia treatments, was still four-plus, both for the Wassermann and Kahn tests.

She was given conductive heat hyperpyrexia from June 16 to June 24. Aside from her mental improvement, she showed, on July 1, negative Wassermann and Kahn reactions, reported from the Ohio State Board of Health.

Conclusions

The cases here reported would seem to indicate that, in hyperpyrexia by means of conductive heat, we have a valuable addition to the armamentarium of the medical profession. In paresis, at least, there is a marked improvement in the mentality of the patient. Of course, we cannot as yet say that it is a cure, for no patient has rested from treatment long enough to prove whether or not these cases will relapse after apparent recovery. However, relapse or no relapse, we have, I am sure, accomplished a great deal when we have brought some of these cases back to normality, if even for a short period. Were the patients our own relatives, I am sure we would be grateful for even that much.

With this method of producing hyperpyrexia, we have been able to bring about serologic improvement, and often complete reversal of the Wassermann reaction—and some were cases in which previous malarial treatment or previous diathermic hyperpyrexia had failed to produce serologic improvement.

Finally, and most important, it seems to me, is the fact that the mortality rate with this method is absolutely zero to date. We have never had a fatality nor a burn of a patient with this apparatus, and we have apparently accomplished as much as is accomplished by hyperpyrexia produced by other methods.

Safe hyperpyrexia seems now to be achieved, and a tremendous field is now

opened up. The field is, in fact, much too large for one group of investigators to cover. The challenge is now before the whole medical profession, to ascertain what disease processes, other than paresis, will lend themselves to safe hyperpyrexia therapy.

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NOTES AND ABSTRACTS

X-Ray Treatment of Acute Infections and Inflammations*

BECAUSE of an excellent educational program on the x-ray therapy of cancer and great volumes of literature on the subject, many members of the medical profession in general, as well as some roentgenologists, have connected the thought of x-ray treatment with malignant conditions entirely, and have forgotten its great value in nonmalignant conditions, particularly acute inflammations and infections.

The exact action of the x-rays is not fully understood, but the work of many pathologists has demonstrated that leukocytes, especially lymphocytes, are rapidly destroyed by very small doses. It would seem that the destruction of leukocytes would be harmful, but apparently a defensive mechanism is set up when they are destroyed by the roentgen rays.

A general statement may be made that x-rays are valuable in the treatment of acute infections and inflammations, almost regardless of location, cause, nature, or degree. Remarkable results have been obtained in cases of erysipelas, furunculosis, infectious granuloma, carbuncles, cellulitis, and localized infections following puncture wounds or abrasions of the skin. It is of real importance that x-ray treatment be given at the first sign of inflammation, in order to obtain the best results. Usually there will be a slight increase of pain immediately after the treatment, and then relief of pain. As a rule, improvement can be noted within from twelve to thirty-six hours after treatment. Many of the infections will abort, the spread of infection will stop, and suppuration will not take place. If necessary, more than one treatment may be given at two- to three-day intervals.

Roentgen-ray therapy, when properly given, is in no way harmful and does not interfere with the surgical management. The cooperation of the attending physician and the roentgenologist will greatly improve the results obtained in the treatment of early infections and inflammations.

D. L. JENKINSON, M.D.

Chicago, Ill.

*From the Ravenswood Hospital Medical Library.

Short Treatment of Syphilis with Heat Therapy, Neoarsphenamine and Bismuth

IF early cases of syphilis are treated with hyperpyrexia sessions, interspersed with and followed by injections of neoarsphenamine and bismuth, the average length of time required to clear up all symptoms and obtain negative serologic reactions which apparently are permanent, can be reduced to 42 days. This cannot be done by pyretotherapy alone.

The hyperpyrexia treatments, during which the patient's temperature was held at about 41° C. (105.8° F.) for 2¾ hours, were given every 3 or 4 days for from 2 to 9 sessions, and between them the patients were given intravenous injections of from 0.45 to 0.9 Gm. of neoarsphenamine. After the fever therapy was stopped, the injections of neoarsphenamine were alternated, at 2-day intervals, with intramuscular injections of bismuth salicylate, for from 5 to 10 injections of each.

This technic requires an organized and expert hospital staff and the hospitalization of all patients for 24 hours for each session of pyretotherapy. All patients subjected to it should have the liver and kidney function tested, before and after treatment.—DRS. C. A. NEYMANN, T. K. LAWLESS, and S. L. OSBORNE, in *J. A. M. A.*, July 18, 1936.

Toxic Barium Salts

THE soluble barium salts (the carbonate, chloride, etc.) are highly toxic and may even cause death. The insoluble sulphate is not toxic.

Pharmacists may make mistakes or may even substitute on a prescription, so, in order to be perfectly safe, it is best, when a phy-

sician has a patient who is to take barium at home, in preparation for roentgenographic work in the morning, to send that patient to the roentgenologist a day or two ahead of time and let him furnish the salt which is to be taken and give full instructions for taking it. The x-ray man, who is doing this kind of work every day, knows his job, and the chance that *he* will make a mistake is negligible.

WILLIAM D. MCNALLY, M.D.
Chicago, Ill.

Diet in Gallbladder Cases*

MOST herbivorous animals, which eat at short intervals, have no gallbladders. Carnivorous animals and reptiles, which eat intermittently and often at long intervals, have gallbladders because they need them to carry on digestion properly. Man is not highly specialized in relation to food, but is more closely related, physiologically, to the Carnivors, so a man with no gallbladder or a poor one should be fed frequently—six times or more a day.

In cases of acute cholecystitis, eliminate all fats from the diet and reduce the proteins. In subacute cases, individualize the diet to fit the fat tolerance, by giving the patient a gruel diet until he is free from symptoms; then adding fats gradually until symptoms reappear; and thereafter allowing a quantity of fats below that which causes symptoms.

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BOOKS

Herrmann: Passive Vascular Exercises in Obliterative Arterial Disease

PASSIVE VASCULAR EXERCISES and the Conservative Management of Obliterative Arterial Diseases of the Extremities. *By Louis G. Herrmann, A.B., M.D., Assistant Professor of Surgery, College of Medicine of the University of Cincinnati and the Cincinnati General Hospital; Director of the Vascular Disease Clinics of the Cincinnati General Hospital and the Christian R. Holmes Hospital of the University of Cincinnati. With a Foreword by Mont. R. Reid, M.D. Illustrated with 80 Engravings and 4 Colored Plates. Philadelphia and London: J. B. Lippincott Company. 1936. Price, $4.00.*

For some years there has been a growing appreciation that health and prolongation of life could result from selecting climatic and other environmental conditions for certain human ailments. However, seeking variations in environmental atmospheric pressure, as being beneficial to certain ailments, though an old idea, has on the whole received but scant attention.

Dr. Herrmann presents the thoughts and efforts of previous investigators upon this subject, with particular reference to the treatment of peripheral vascular disease by alternately reducing and increasing the air pressure on the extremity. He has personally devoted much time and energy to the development of modern mechanical apparatus which, by passive vascular exercises, in obliterative arterial disease prevent the development of gangrene. Both clinically and experimentally, alteration of the environment air pressure has been shown to constitute an efficient and truly physiologic means of promoting the establishment of an adequate collateral arterial circulation in human extremities after the major or secondary arteries have been obliterated by trauma or disease. This method is believed by the author to be superior to the generally used methods of treatment by chemotherapy, physical therapy and surgery.

The book is devoted to the exposition of the author's experimental and clinical experiences with passive vascular exercises under varied atmospheric pressure. It contains also an extensive bibliography of references. It should be interesting as opening up this new field of therapy.

Buckstein: Diet

FOOD, FITNESS AND FIGURE. *By Jacob Buckstein, M.D., Consulting Physician in Diseases of the Stomach and Intestines to United States Veterans' Bureau, Central Islip and Rockaway Beach Hospitals, etc. Introduction by Harlow Brooks, M.D., Emeritus Professor of Clinical Medicine, New York University; Visiting Physician, Bellevue Hospital. New York: Emerson Books, Inc. 1936. Price, $2.00.*

This is a scientific and reliable layman's book which presents, in brief compass, the essential facts about the body's nutritional requirements and the relation of food to weight and fitness. It should do much to counteract many of the food fads now obsessing many people. The appendix contains tables of weights and food values and a number of specimen menus. Physicians can recommend it with confidence.

*Abstract (by G. B. L.) of a talk before the Medical Round Table of Chicago, Feb. 11, 1936.

PROGRESS

Scientific thought can not be stayed. The world marches on into better envelopment. To the hard-shelled and unimaginative we offer our deepest sympathy.—WILLIAM J. HALE, Ph.D.

PROCTOLOGY

ASSOCIATE EDITOR

WILLIAM A. HINCKLE, M.D., Peoria, Ill.

Proctitis and Constipation

By Guy Wendell Burns, M.D., New York City

NINE-TENTHS of all human ills can be traced to dysfunction of the gastro-intestinal tract. Ninety percent of all human beings have some form of rectal disorder. Ninety percent of all body resistance to disease is dependent upon the normal, healthy, complete functions of digestion and elimination.

Intestinal functioning can not be abnormal in one section and normal in another. All sections must function normally at the same time to maintain robust health. The whole intestinal functioning should and must be complete.

Many signals of distress indicate that destructive, toxic substances in the intestinal canal are doing damage. Bad breath, belching of gas, coated tongue, body odors, etc., are definite signals of undue retention of foul intestinal contents.

Chronic constipation is a universal disease. The entire nation has been afflicted with it at some time, and a very large percentage of our population suffers from its ravages year in and year out. Train-loads of laxative tablets and pills go the way of all garbage every year. These are only makeshifts, since they do not remove the cause.

After twenty years of studying and treating gastro-intestinal and rectal diseases, I am convinced that chronic proctitis and chronic procto-colitis are the causes of chronic constipation. Ninety percent of our people have proctitis in some form or degree. It might be called a "distinction," because two of the world-famed "quints" have been already overtaken by this disease, which Dr. Dafoe says probably came from septic diapers.

This is not surprising, since infants, children, and youngsters in their teens, are constantly constipated. In fact, in middle life, many have discovered that they acquired their initial proctitis from a septic diaper, and from misguided neglect during their younger years. Children, from infancy up to twenty years of age, seldom acquire any sound intelligence about the care of their elimination and, unfortunately, this lack of accurate knowledge carries on, in many instances, through mature years. The child is not to blame. Responsibility rests with the parents. The unfortunate part of this fact is that the parents, many times, have a distorted conception, or no accurate knowledge, of what normal function really is. They have taken the advice of someone who, in reality, knows no more about normal function than they do themselves. Oftentimes unsound advice comes from their own doctor, and the children of successive generations are the sufferers.

Procto-colitis is an inflammation of the mucous lining of the rectum and sigmoid. The disease process may be mild at first and can exist for many years before it becomes known to the individual. Nevertheless, a large percentage of our population suffers from chronic proctitis, without its being properly diagnosed or properly treated.

The first effect of inflammation is to produce heat that dries out the tissue. The drying-out process in the rectum is always characterized by the presence of inflammatory exudate, which accumulates on the mucous lining. The exudate on the surface of the lining in the bowel is carried away with the bowel movement, but that which accumulates *under* the mucous lining has no way to escape. At first it resembles beads of perspiration. Later, as the volume of the exudate increases, it must find room for itself, and so it burrows through the tissues, following the line of least resistance. This burrowing of exudate makes channels. I have seen, in one case, a dozen channels, of different size, length and direction, all of which could be demonstrated.

These channels are filled with foul, toxic moisture. Some of this foul moisture is reabsorbed into the system, but the rest remains in the channels, carrying on its work of destruction, until resistance in the rectal tissue is greatly impaired, or destroyed altogether. When this destructive stage is reached, the mucous lining has already begun to separate

from the rectal wall like wet wallpaper. If this loosening of mucous lining has gone on for a long time, a large area becomes involved, the connective tissue under the lining is partly destroyed, and the lining hangs in loose folds. This condition always precedes the formation of internal hemorrhoids, and it accounts for many failures to cure this disorder, as well as a long list of other distressing rectal conditions, by the old surgical methods.

Persistent inflammation and abnormal contraction of the anal structures eventually produce stasis in the anal blood circulation, and also in the anal exit. Straining at defecation develops rectal, ano-rectal, and muco-cutaneous mucous sacks and pockets, around and in the anal orifice. The strictured condition of the anal muscles makes it possible for the frail, friable mucous membrane to tear or crack, resulting in fissure or ulceration. All tissues and structures making up the anal canal and sphincter muscles are diseased. Swelling and contractions not only inhibit function and plug the anal vent, but also disturb the blood circulation in that orifice.

The accumulation of inflammatory exudate in the submucous, sub-tegumentary, and super-muscular channels and spaces is frequently the cause of pruritus ani. As the vitality of the rectal tissue lessens, structural changes go from bad to worse. If the channel walls break down, one or more channels may became infected and develop into ano-rectal abscess or fistula.

All this time the tissues in the pelvis, buttocks, and genito-urinary organs are being invaded and saturated with this toxic exudate, and serious tissue changes are going on. Induration, ulceration, and the formation of cicatricial tissue take place, destroying elasticity and normal function. In the upper-middle anterior wall of the rectum there is an area that easily becomes indurated, ulcerates, and bleeds freely when touched. The tissue is friable and will tear easily.

The third sphincter of O'Beirne, at the junction of the rectum and the sigmoid, together with other diseased areas of the rectum, becomes contracted. This contraction reduces the lumen of this most necessary organ. Lessened caliber means lessened capacity, lessened efficiency, lessened elimination, and more retained foul feces and gases.

Sympathetic souls are worrying about undernourished school children. They are eager to stuff them, putting good food into foul stomachs and intestines filled with putrid matter.

We now know that symptoms of approaching destruction of tissue from chronic proctitis, chronic procto-colitis, and chronic toxemia are always in evidence. Foul breath; coated tongue; indigestion; belching of gas; flatulency; "bilious" headaches; early decay of teeth; "catarrh" of the nose, throat, and ears; impaired hearing and sight; dry, harsh skin; inability to perspire; mal-assimilation; increased nervousness; insomnia; bowel distention; pains in the back, end of the spine, legs and joints; putty-colored face; skin eruptions; shortness of breath; painful and irregular heart action; frequent dizziness; and prolapsed abdomen are suggestive symptoms.

Chronic constipation is a protean condition that insidiously slays more people than all other diseases combined, due to tissue poisoning from chronically retained foul feces and gases. Chronic proctitis causes various painful, septic, anorectal symptoms that are diagnosed as separate diseases, far removed from the anal area. Treatment fails because of wrong diagnosis.

It is now a well-established fact that dozens of symptoms, of a reflex, neuralgic type, which give distress far removed from the rectal field and which have no visible connection with anorectal conditions, are relieved when anorectal pathoses are cleared up.

If human beings could only be taught to realize the importance of employing the same measures of hygiene to their digestive and eliminative organs that they do to the rest of their bodies, they would save themselves many doctor's bills and much distress.

Every man, woman, and child should have a thorough rectal inspection at least twice each year. Prevention measures can stave off many distressing conditions that come to neglected cases later in life. A healthy rectum means more to mental and bodily health than do teeth, tonsils, or sinuses.

57 West 57th St.

CENTRALIZATION

Over-centralized industry would not exist without the favor of the law; but over-centralized government and industry combined can exist only when freemen have entirely abdicated their freedom.—SENTINELS OF THE REPUBLIC.

LIBERTY AND RESPONSIBILITY

Individual liberty is individual responsibility. Whoever makes decisions is responsible for results. Individual security implies the sacrifice of freedom.—ROSE WILDER LANE, in *Sat. Eve. Post.*

NOTES AND ABSTRACTS

Basic Principles in Constipation

THERE are several basic principles which must underlie the successful treatment of constipation:

1.—A daily bowel movement is not a necessity for a state of health, if indeed it is normal in more than 70 percent of people.

2.—The routine use of cathartics to "open the bowels" is contrary to physiologic good sense.

3.—Laxatives should be prescribed along with physical therapy or psychic treatment, or after these have failed, and the drug or drugs employed for this purpose should be carefully selected so as to meet the *individual* conditions present in each case.

4.—The administration of a laxative may be used as a *diagnostic* measure, to determine the degree to which the symptoms present are the result of constipation.—MICHAEL G. MULINOS, M.D., Ph.D., New York, N. Y., in *Rev. of Gastroenterology*, Dec., 1935.

Internal Hemorrhoids*

Crookall says that, in the last two or three decades, there have been several improvements in the method of treating internal hemorrhoids. The most important is the use of injections, which, in hemorrhoids of the first and in many cases of the second stage, gives most excellent results without pain or hospitalization.

After making the usual rectal examination, a rectal injection of about a pint of water is given. The patient is then requested to repair to the toilet and to use as much force as possible in getting the hemorrhoids completely prolapsed. By this method and this method alone can the size and texture of the internal hemorrhoids and the amount of the tissue involved in the prolapsus be determined.

The following classifications will be found useful:

First stage: The sulcus between the anal wall and the hemorrhoids is in the upper portion of the anal canal, at the pectenate line. The anal lining is intact.

Second stage: The sulcus between the hemorrhoids and the anal wall is at the lower end of the anal canal, at the intermuscular septum. In these cases the lining of the anal canal has been dissected up by the hemorrhoid and forms its lower covering. This is an important surgical point, as removal of too much of the anal lining leads to postoperative contracture.

Third stage: In those rarer cases in which the anal lining is completely prolapsed, the fibrous adhesions at the mucocutaneous line are stretched or destroyed and the external hemorrhoidal veins are affected, giving a large, smooth mass with no sulcus between the internal and external hemorrhoids, the lower part of this mass being covered with true skin; the intermediate portion with transitional epithelium of the anal lining; and the upper part with rectal mucosa.

Fourth stage: There is little or no internal involvement, but instead we find an extensive varicosity of the external hemorrhoidal plexus, which bulges on both anal surfaces, closely simulating a prolapsus. The covering of these swellings is skin and transitional epithelium, and the defect is bounded above by the pectenate line. These cases are not diagnosible by inspection or palpation unless an enema be given, unless in a condition of thrombosis.

Unless the patient prefers an operation, Crookall uses the injection treatment in hemorrhoids in the first stage, and also in the early cases in the second stage, where the sulcus on protrusion is at the pectenate line, the anal lining being intact. In both of these types, however, we often find an abnormally small anal canal or a fibrosis of the anal lining (pectenosis). In order to obtain the best results, it is necessary to take care of this complicating and often causative factor. This can be done in the office by a divulsion or pectenotomy, the injections being started a week or so later.

The more advanced cases of the second stage (where the anal lining forms part of the covering of the hemorrhoid) and the third-stage cases are always treated surgically. However, if the patient is bleeding and the time is inappropriate for an operation, injections may be used as a palliative measure.

Involvement of the external hemorrhoidal plexus (fourth stage) is not susceptible to injection. One cannot perform miracles with a few grains of phenol or quinine-urea hydrochloride.

W. A. H.

*Northwest Med., Jan., 1936.

A LIVING FOR THE DOCTOR

(The BUSINESS of Medicine)

●

Ethical Publicity

ALL that a really good doctor needs in order to build up an active and profitable practice is that people should know about him and become sufficiently interested in him to look him up and give him a trial. *Publicity* is the big thing!

But there's the rub, with a professional man! The crystallized *customs* of his profession (inaccurately spoken of as "Ethics," though in matters like this no ethical question is at all involved) prevent him from going to the public directly with a statement of his capabilities, no matter how true that statement may be, so unless he is on the staff of some famous hospital or clinic, which will "sterilize" his veiled advertising of any "unethical" taint, or has some newspaper reporter for a friend, his chances in this line are slim.

There remain open to him, however, two channels for increasing his list of acquaintances, who are always potential patients: one professional, by reading papers before medical meetings, or writing them for reputable medical journals, or both; the other lay, by taking an active part in the life of his community, his county, or his state, or all three of them, either in a political, business or religious way, or, if he is a well-informed man and a capable speaker, by accepting every opportunity to speak before clubs, schools, or other groups on matters connected with hygiene and public health, or any other matter with which he is thoroughly familiar.

Every physician who aspires to take a high place in his profession and to be accounted a generally useful citizen should be doing all of these things, regularly and consistently.

At this particular time, a special avenue of ethical publicity is wide open, and an enthusiast is eager to help any man who desires to make use of it.

A generation ago, informed people began warning the public that, if the destruction of our trees continued, dire disaster would result. Today these prophecies are being fulfilled in ample measure, pressed down and running over. The tales of floods and drought and dust storms have made and are making horribly depressing reading in the newspapers and magazines, but too few people recognize that many of these threatening happenings are the direct result of our childish and selfish policy of wanton deforestation.

Here is the chance for a wide-awake doctor to make a name for himself as an educator of the people and as a helper in correcting the present alarming conditions. Various Government agencies are making a great deal of noise about "doing something about it," but "large bodies move slowly," and, anyway, about half of the money so spent goes for political purposes. There is a grand opportunity for a number of active and foresighted *individuals* to make a powerful impression upon the minds of the people in their vicinities by preaching the doctrine of *reforestation* in a practical way. This is how it can be done.

It happens that there is a man, whose name is well known to every practicing clinician, who has, for the past ten years, been devoting a large part of his time and energy, and many thousands of dollars, to the planting of trees, not only in this, but also in other countries, and to encouraging others to do the same. With this end in view he has established vast nurseries for the propagation of evergreen and hardwood trees and distributed them to other tree-planters at prices less than the cost of their wholesale production. He also sends out millions of tree seeds every year. That man is Mr. Frank S. Betz, of Hammond, Ind.

The concrete suggestion is this. The school season will soon be beginning. An enterprising physician in a small town can easily ascertain the number of pupils who will be enrolled in his town, or even in the entire county. For a few dollars he can procure from Mr. Betz enough tree seeds to give every pupil from fifty to 100 of them, and could then spend a few minutes at each

school explaining to the children how to plant and tend the seeds (these instructions will be sent when the seeds are ordered, if requested).

If he wants to go into the matter more deeply, he can ask the teachers in the schools to ascertain how many of the children will promise to plant small trees and tend them, if the trees are given to them. For $10 or less, the doctor can obtain from Mr. Betz enough black walnut, blue spruce, Chinese elm, or other trees, a foot or more high, to give at least one to every cooperating pupil in a good-sized town.

Imagine the discussion which would result, in the families of the school children and in the local papers, from an action like that! And the whole thing would be, not only absolutely "ethical," but would be a direct blessing to every child who participated in it, and also to the community and, very probably, to a much wider district and many more people.

I am sure that Mr. Betz will be delighted to send full particulars and prices to any physician who will write to him, and to cooperate in every possible way in making such a campaign a success. Letters on this subject should be addressed to Mr. Frank S. Betz (Personal), Betz Bldg., Hammond, Ind.

Now is the time for fall planting and for reaching the school children.

I shall be glad to receive and publish reports from any physicians who undertake this valuable form of public service and ethical publicity.

GEORGE B. LAKE, M.D.

Waukegan, Ill.

NOTES AND ABSTRACTS

Capital and Capitalism

THE simplest definition of capital in the dictionary is, "An accumulation of the products of past labor capable of being used in the support of present or future labor." Capitalism is defined as "the concentration of capital in the hands of a few."

With these definitions I have a quarrel. They are responsible for much of the confusion and dissension existing in our economic world.

Let us define capital more properly as "any accumulation capable of being used in future production," and capitalism as "the economic system which allows the individual to own property."

Accumulations of capital are not necessarily attributable, in their major proportion, to physical labor. Thought or mental labor may be a much more potent factor.

Capitalism does not necessarily imply concentration of wealth.

In an ideal capitalistic state, capital should be widely distributed, the more evenly the better. This country has developed millions of small capitalists and was well on its way toward creating more when our unfortunate depression ruined many of us financially, both big and small.

It was mostly our fault. We invested unwisely or gambled and lost. We were also exploited by our tax-eaters and their discriminating laws. There is nothing to do but reform our government, benefit by our experience, and try again.—FRANK A. GARBUTT, in *Los Angeles Times*.

Pernicious Anemia of the Pocketbook

DO you get a shock every time you count up your money and find that you have less than you thought?

Is this followed by a slight sinking spell when you wonder what became of the missing money?

Does this cause a pain in your head, followed by a remorseful feeling?

If you do, you have that modern new disease known as pernicious anemia—pernicious anemia of the pocketbook.

It is not contagious. Everybody in America is suffering from it. You're not the only one. It is ravaging among all the grown-ups in America. The medics have no cure for it. It is sooner or later fatal unless a remedy is found.

The cause of pernicious anemia of the pocketbook is well known and well recognized. See if this doesn't fit you.

You have been in the habit of crawling out of bed in the morning from between cotton sheets taxed at 4.2 cents per pound. You have gone into the bathroom and turned on the electric light, taxed at 3 percent of the amount of your bill. You have brushed your teeth with a dentifrice taxed at 5 percent. The soap you used had a 5 percent tax on it.

When you sat down to breakfast there was a card on your plate, printed in invisible ink which you could not read, but which said nevertheless: "Cover charge payable to government—25 percent of the cost of all

food on this table." Your ham was taxed $2.25 per hundred weight. The ice-water came from a refrigerator which was taxed 5 percent of what you paid for it. The toast you ate carried 53 separate taxes. Other foods, the silverware, linens, dishes and other household appliances each bore the sign—also invisible—of hundreds of tax collectors.

This was true up to a short time ago when the United States Supreme Court declared the AAA and the processing taxes illegal. But you are in for more of the same thing shortly when Congress completes a new tax concoction to replace the processing taxes, and your taxes will be no less than before.

When you light a cigarette you are taxed nearly 100 percent. You paid 13 cents for the package, but you didn't notice the little green stamp pasted on the top which, had your curiosity been great enough, would have disclosed to you that Uncle Sam collected 6 cents in tax.

These are what cause your malady of pernicious anemia of the pocketbook. These are why you get a shock when you count up your money and find you haven't as much as you thought, why you have that sinking spell, why you develop a pain in the head followed by that remorseful feeling.—NATIONAL ECONOMY LEAGUE.

A Doctor Abandons His Patient*

A PHYSICIAN or surgeon who leaves or abandons his patient in a critical stage of disease, without reasonable notice to enable the patient to secure another medical attendant, when the giving of such notice is reasonably possible, is guilty of culpable dereliction of duty, and, if damages are occasioned thereby, is liable therefor.

In the absence of an agreement, understanding or notice to the contrary, when a physician is employed to render service, the relation of physician and patient continues until ended by:

1.—The mutual consent of both parties.

2.—The physician's withdrawal after reasonable notice.

3.—The dismissal of the physician by the patient.

4.—Cessation of the necessity that gave rise to the relation.

Many physicians treat patients, looking to some unit of government, insurance company, employer or other agency for payment, and when they do not receive payment, abandon the patient. The last estate of these doctors is worse than the first.

Physicians are sometimes called in consultation to give special service to a patient, and having performed the service abandon the patient without notice. The consultation may be scientific medicine, but the abandonment without notice may be malpractice.

Some physicians who treat employees under the provisions of the Workmen's Compensation Act appear to have a compensation complex. Some of these physicians abandon their patient upon receiving advice or instructions from an insurance carrier or the Labor Commissioner that certain forms of treatment must not be used, or that no further treatment may be given without first securing the consent of those agencies. There are no moral, professional or legal justifications for abandoning a patient on such grounds, and when it is done the physician invites a suit for malpractice.

Many a doctor has escaped liability because his patient did not know his legal rights; but patients are learning and the legal profession has an increasing contact with injured people, which is well calculated to reduce the chances of escape of the doctor who is derelict in his professional duties.

CZAR JOHNSON, M.D.

Lincoln, Neb.

*Nebr. S. M. Jour., Feb., 1936.

"A Word to the Wise"

PAY special attention to the little things—the children—and there will be less gross problems to deal with in the physically mature.

The man who greets his family with a smile at breakfast time in his youth is more apt to greet his grandchildren in future years.

The people who disregard the red lights in their youth are not apt to need an old age pension.

The wise traveller on the highway of life stops long enough, occasionally, to take stock of the sources of his power—his stomach and heart.

It's fairly safe to assume that old Graybeard has been cautious, even in his indiscretions.

The man who whistles in the rain is generally one who enjoys his breakfast and keeps on good terms with his wife.

A fat pig seldom squeals unless hurt. It's the poor and disappointed ones that do the squealing.

It's much easier to get a well-fed cat to purr than one that is lean.

A sick rooster never crows. The man or woman who plods a slow and melancholy way is generally sick, either in mind or body—often both.

The disappointment that comes of frustrated youthful desires or ambition may be the "skeleton in the dark" in complexes of mature years, especially if the way of travel proves to be disconcerting and hard.

C. E. BETTS, M.D.

San Antonio, Tex.

THE SEMINAR

"A MONTHLY POSTGRADUATE COURSE"

(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Ill.)

Problem No. 7 (Medical)

Presented by Louis P. Ibelli, M.D., Brooklyn, N. Y.

RECAPITULATION: A young woman of 22 years, who had had a fall at the age of 13, but no illness until two weeks before the present trouble, when she complained of headaches, had a "fit" one night at bedtime, after which her husband, thinking that she was asleep, did not disturb her.

The next morning she was still unconscious and was admitted to hospital in deep coma, with a little foam on her lips. She had a few slight, tonic convulsions. Her blood pressure was 150/90; pulse, 60 to 70; temperature, 98° F.; respiration tending toward the Cheyne-Stokes' type; a trace of albumin in the urine; pupils unequal; no other abnormal signs.

Requirements: Suggest probable diagnosis. What would *you* have done in a case like this?

Discussion by William T. Gueno, M.D., Quincy, Ill.

Obviously, this case calls for a consideration of all the causes of coma, but for practical purposes, I am suggesting only those conditions associated with coma that usually are encountered.

The history and findings apparently rule out coma due to opium or alcoholic poisoning, diabetes, hysteria, eclampsia, and brain tumor. The early fall suggests the possibility of Jacksonian epilepsy. The age of the patient and the negative history of previous illness, with some of the physical findings, would rule out cerebral hemorrhage and cerebral thrombosis.

A history of acute infections, of childhood diseases followed by endocarditis, or of disease of the circulatory system would suggest the consideration of cerebral embolism. Apparently this is ruled out, though some imbalance between the heart and blood vessels probably exists.

Murray ("Symptomatic Diagnosis"; 2nd Edition) says: "Among diseases in which inequality of the pupils is a conspicuous feature, special mention should be made of thoracic aneurysm or any disease causing pressure upon the thoracic sympathetic nerves, epidemic meningitis, apoplexy, and brain tumor."

Despite the absence of disturbance of vision and the presence of unequal pupils, the hypertension, slow pulse, Cheyne-Stokes' type of respiration, and trace of albumin in the urine, the convulsions and coma suggest an acute comatose form of uremia, due to an existing renal disease. I believe I would consider epilepsy in a differential diagnosis.

The following would be helpful:

1.—A complete history, personal and family.

2.—Complete urinalysis.

3.—Blood examination for non-protein nitrogen, urea nitrogen, uric acid, and creatinine.

4.—Renal function tests.

5.—Tests for acidosis.

6.—Kahn and Wassermann tests, to rule out syphilis.

7.—If indicated by the course of the illness, an x-ray study of the head and also of the kidneys.

I believe the immediate treatment would be expectant and symptomatic—sedatives for convulsions; an ice bag to the head, etc. Treatment of the underlying cause, if it proves to be uremia, can be summed up in one word, *elimination.*

Discussion by F. L. Wood, M.D., Lynden, Wash.

The patient did not have diabetic coma, since no mention of glycosuria was made in the urinalysis report. Neither is it likely that she was suffering from uremic poisoning, because of the small amount of albumin in the urine and the absence of a suggestive clinical history. The unequal pupils and general picture might be one of cerebrospinal meningitis, but there was no fever, and other important symptoms were lacking. It seems

likely that it was a definite cerebral case and the first thing that suggests itself is either idiopathic or traumatic epilepsy, for she had had a convulsion before, which had been followed by normal sleep. The problem did not state how long the state of coma following the second convulsion had been present, and it may have been only that which usually follows an epileptic convulsion and which blends into normal sleep in most cases. We also have to consider the possibility of cerebral tumor and syphilis. Syphilis can cause epileptoid convulsions, even without the presence of gummas.

In this case, the first thing I would have done would have been to obtain a sample of urine for urinalysis and then, after the urinalysis proved to be negative, I would have obtained a sample of blood for Wassermann and blood-sugar tests, even though the patient, in the meantime, recovered from the convulsion, and I felt that I was dealing with a simple case of epilepsy of either type.

Although no history of syphilis was given in this case, it may have been concealed by the husband or, as sometimes occurs, particularly in women, a syphilitic infection had shown little or no primary and secondary symptoms. Normal Wassermann and blood-sugar tests would lead me to believe, in this case, that I was dealing with epilepsy or brain tumor, and these should not be hard to differentiate. Treatment, for the moment, must be expectant.

Discussion by E. C. Junger, M.D., Soldier, Ia.

It seems foolish to ask a physician to make a diagnosis by mail on the basis of as slim a history as that given, though a quack might do it without hesitation. We are not even told whether or not the woman was pregnant. It might have been uremia or epilepsy or hysteria, or the woman might have been under the influence of a narcotic or have taken poison.

On the basis of the history given, I should have bled the patient to reduce the blood pressure and the full pulse, and then have given her a large, hot (115° to 120° F.) enema of hypertonic saline solution and washed out her stomach, leaving it full of a solution of one or two ounces of magnesium sulphate in a pint of water. If she had responded to this treatment, I should then have put her on a salt-free, low-protein diet, and not much of that unless she would agree to take a great deal more vigorous exercise than most people take in these days of labor-saving devices and automobiles.

Discussion by Edmund Lissack, M.D., Concordia, Mo.

In the statement of this problem, no mention is made of the menstrual and maternal history, but it is assumed, by the history as presented—married, age 22, headache, convulsions, coma, and albumin in the urine—that this patient was pregnant and that this was a toxemic condition and should be so treated.

Convulsions occurring during pregnancy may also be caused by conditions other than eclampsia. Chief among these are epilepsy, uremia, apoplexy, and hysteria, and it may be necessary to identify other diseases which could cause convulsions in the nonpregnant state. These are points to be remembered in the differential diagnosis.

Considering this an eclamptic case, it would be advisable to give ¼ grain (16 mg.) of morphine sulphate, in 2 cc. of 25-percent magnesium sulphate solution, intramuscularly, immediately upon admission. This dose may be repeated in one hour. The respirations and pulse must be carefully watched. If urination has not been spontaneous, the patient should be catheterized, to determine whether uremia is present. The patient should then be given 500 cc. of 20-percent dextrose solution, intravenously and carefully, and constantly watched. She should not be left one moment alone.

The pregnancy, if present and depending on the stage and circumstances, may have to be terminated.

Discussion by John Clark, M.D., Independence, Kans.

This is a baffling case. Uremia, epilepsy, eclampsia and encephalitis, all may present coma following convulsions. With a history of a fall nine years ago, it is a good while to wait for epilepsy to appear from that cause. It should be recalled, however, that a fall might start a cyst in the brain. If there is such a cyst as the result of the fall, all of the symptoms in this case could be thus explained.

Could this be encephalitis? We are told there is no stiffness of the neck. But a stiff neck may appear later than coma in encephalitis.

Could this case be uremic? There are certain points that leave that diagnosis in the background. A trace of albumin in the urine is a slender thread upon which to hang a diagnosis of uremia. There seem to be no major signs of failing kidneys in the history, and a diastolic blood pressure of 90 is quite unusual in uremia. This condition cannot, however, be lightly dismissed in this case.

Starting with epilepsy, what have we, other than the history of a fall, to make us suspicious of it? It is unusual for coma following epilepsy to last as long as it did in this case. There should be lucid periods between the fits, followed by headache. There is little light to be gained from the condition of the pupils for a diagnosis between epilepsy

and a cyst of the brain. A cyst would cause changes in the disc, and the eye-grounds should be studied thoroughly. Her past history and family history would need to be gone over carefully to discover any predisposition to epilepsy.

It is assumed that this woman has never had a child. The silence of Doctor Ibelli on this point makes us suspect eclampsia. She is a young woman. She is married. We get no hint that points to the size of the uterus. If she is not pregnant, there is room for considerable speculation as to the cause of her coma. As we get her history of continual headache, not relieved by lenses; of a sudden fit, followed by coma; of a systolic blood pressure of 150; of repeated tonic spasms; of froth on her lips; of a trace of albumin in her urine, all strongly suggest that this condition is eclampsia.

I should at once start by giving this woman 20 cc. of a 10-percent solution of magnesium sulphate intravenously, repeating it after a few hours if required; also 500 cc. of a 50-percent dextrose solution, intravenously, if and as indicated. If the convulsions continued, I should give 30 grains (2 Gm.) of chloral hydrate, in solution and by rectum, and repeat the dose every eight hours, if needed. This patient should be kept in a dark room, with a thoroughly competent nurse.

Discussion by Geo. B. Lake, M.D., Waukegan, Ill.

On the face of it, the history given in this problem is obviously inadequate to furnish the basis for a clear-cut diagnosis, and may, at first sight, seem unfair as a *Seminar* problem.

As a matter of fact, however, just such cases as these are not infrequently presented to the physician for his attention, and in spite of the sketchy history and the pressing nature of the condition, which gives little or no time for laboratory examinations, he must rely on the physical signs which can readily be elicited for a *tentative* diagnosis which will suggest a course of treatment. On this basis the problem is a fair one.

The history of a fall in girlhood is probably without significance. With the present symptoms, the former headaches suggest some *progressive* disturbance in the cranium; not a hemorrhage. The trace of urinary albumin is scarcely sufficient, by itself, to suggest uremia. The inequality of the pupils and the coma of several hours' duration (she may have been comatose all night) suggest *intracranial pressure*, and the increased blood pressure and the slight slowing of the pulse are somewhat confirmatory.

The woman was "well nourished," so phlebotomy (watching pulse and blood pressure to determine the quantity of blood to be removed) would probably be good practice; or the careful *intravenous* injection of 70 cc. of 15-percent solution of sodium chloride or a 50-percent solution of dextrose might be tried.

Solution by Dr. Ibelli

This patient had apparently been unconscious from the time she had the "fit," on the previous night, until she was brought to the hospital, and was in a desperate condition when first seen.

Soon after admission her pupils dilated and the corneal reflex was lost; her respiration became of the typical Cheyne-Stokes' type; and her lips became cyanotic, giving, momentarily, a suggestion of epileptic coma. There was no time to make a spinal puncture, as she died within twenty minutes.

Autopsy revealed congestion of the liver, spleen, kidneys and heart, but no other observable changes in these organs. The pleura showed a few adhesions, but no excess fluid.

The *brain* showed slight hyperemia of the cortex and, in the posterior occipital portion, above the calcarine fissure, a ruptured cyst with a membranous sac, mostly on the right side, which apparently had contained about 50 cc. of straw-colored fluid.

Her death occurred so promptly that there was no time to make a complete and definite diagnosis or to administer any treatment.

Problem No. 9 (Medical)

Presented by M. Gleason, M.D. Mendota, Ill.

A well-developed young farmer, 26 years old, weighing 185 lbs., 5 feet 9 inches tall, called at the office with the following symptoms: Diarrhea (6 to 7 stools daily); headache (frontal); soreness of all muscles; nausea; temperature, 101° F.; pulse, 100, regular and of good quality; and general weakness. These symptoms were of one day's duration, and he had felt well up to that time. This patient had been working in the oat field and drinking a great deal of cold water.

The physical examination was negative. The condition appeared to be an intestinal infection, so he was put to bed, on a liquid diet, and Kaomin was administered.

Two days passed, the diarrhea ceased, the temperature became normal, the pulse was 82, and the headache and muscle soreness disappeared. However, the nausea persisted, and the weakness was pronounced.

He went outside on the fourth day, and said that everything appeared as though the sun were shining on snow. He stated that it bothered his eyes. He began vomiting everything taken. Everything had an offen-

(Continued on Page 466)

CLINICAL NOTES and ABSTRACTS

The Management of Tumor Cases

ONE of the reasons why the malignant diseases are not more promptly diagnosed and adequately treated has been (and, to a large extent, still is) because the whole handling of the patient has been too much a one-man affair. In these cases the cooperation of several experts is generally required, if success is to be attained, but must be so planned as not to interfere with the personal relation between the attending physician and his patient.

The Ravenswood Hospital—a moderate-sized general hospital in Chicago—is handling this work so well that a brief outline of the methods employed (as reported in their *Library Bulletin*) can scarcely fail to be of real interest to the officials of many other hospitals, large and small, and also to a considerable number of individual physicians, because the suggestions here made can be carried out more or less fully in any community of more than country-town size (and even in some of the smaller places), though there may not be available a hospital so fully staffed and equipped as to be able to do all the work under one roof.

Patients with tumors are brought into this hospital and are examined by the pathologist, roentgenologist, and any other staff members whom the attending physician may wish to invite. After this preliminary examination and consultation, the best methods of procedure to perfect a diagnosis and institute treatment are decided upon.

Although regular microscopic sections of all tumor tissue removed are made routinely, rapidly-prepared frozen sections are made in all cases in which they seem indicated. The laboratory is equipped to provide rapid frozen sections, with a diagnosis in five or ten minutes after removal of the tissue.

If a surgical operation is indicated, it is performed by the attending physician or by any surgeon whom he may elect to assist him in the operation. If x-ray therapy is indicated, the x-ray department is adequately equipped to provide it. If radium therapy is decided upon, they have readily available sufficient radium to handle this type of therapy satisfactorily.

The follow-up system is conducted in the following manner: While the patient is in the hospital, the "Tumor Forms," recommended by the American College of Surgeons, are completely filled in by the resident and attached to the regular hospital chart. A graduate nurse, who serves as secretary and social worker, makes an additional copy of the form, which she keeps as a permanent record for the Tumor Study Committee. Each time a tumor case is admitted to the hospital this secretary is notified, and at three-month intervals after treatment she writes the patient a letter, signed by the attending physician, requesting the patient to come to his office for observation. The physician is furnished with a questionnaire which he fills in with regard to subsequent treatment, development of metastases or recurrences, and general condition of the patient. This questionnaire is returned to the secretary, who copies the information on her permanent record.

The Tumor Study Committee holds frequent meetings, at which tumor cases are presented and studied and various methods of obtaining earlier diagnosis and perfecting therapy are discussed. There are also frequent informal meetings, which are called on short notice whenever a tumor case is available which could be studied at that time, without waiting for a formal meeting.

The results of this routine of bringing patients into the hospital and consulting with the pathologist and roentgenologist and other members of the attending staff materially facilitate the making of an early and more accurate diagnosis, have materially improved the immediate methods of treatment, and seem to promise great improvement in the end-results obtained through the follow-up system, by urging the patient to return for observation at frequent intervals.

This outline seems to present a worthy target for us to aim at in our efforts to improve the diagnosis and treatment of malignant diseases.

GEO. B. LAKE, M.D.

Waukegan, Ill.

CLINICAL MEDICINE AND SURGERY gives me more practical information than all others. More power to you.—C. W. H., M.D., N. C.

How to Live with Pulmonary Tuberculosis

(Condensed Directions to Patients)*

TO MY patients with pulmonary tuberculosis I give the following set of directions, and insist that they study and remember them:

Providing you adopt certain measures and simple rules of living, you will be quite able to live a moderately active life of normal duration in spite of your trouble.

1.—Cultivate an optimistic outlook as to the future. Avoid emotional upsets like worry, anger, fretting, and excitement. Avoid too much social life. Do not let anything at all irritate or disturb you. Do not place reliance on statements made by and do not accept advice from others than your doctor.

2.—Do not become disturbed if you should have a hemorrhage. It does not mean that you are hopelessly worse or cannot be cured. Go to your home in the manner involving the least muscular exertion (preferably by taxicab), go immediately to bed, and send for your doctor. *Do not walk home!*

3.—Rules for *Exercise* (this means *walking):* None, if any one of the following symptoms is present: Fever; blood in the sputum; loss of weight; rapid pulse; or shortness of breath. Exercise should be under the direction of your doctor. If it is allowed, take it regularly and systematically, whether in rain or shine. Never allow yourself to become tired, or out of breath. Never run or lift heavy weights. Walk slowly and walk uphill at the start, so as to come downhill on the return. Never do any mountain climbing. Never exercise immediately before or after meals.

4.—*Work* and *Rest:*—It is always best to consult your doctor as to the kind of work and the number of hours of work you are allowed to perform. The measure of how much exercise and work you may do is best determined by him. Rest periods during the day are very important. Try to rest an hour or so during the afternoon. Remember that excessive physical strain, even for a short time, may produce serious complications. Retire early at night—at least by 10:30 P.M.

5.—*Out-Door Life:*—It is best to remain out of doors from seven to ten hours during the daytime. Sleep out of doors nine to ten hours, except in the winter. When sleeping indoors, all the windows should be open wide. Be careful of draughts on the head. Avoid crowded rooms. When you have a cold, remain in bed and send for your physician. Never take sun baths unless permitted to do so by your doctor. Keep your head out of the sun on warm days.

6.—*Food:*—Eat three large meals a day regularly. Eat plenty of all foods, especially of meats, fats, and milk. Eat lunches of eggs, milk, cocoa, etc., if under weight, at about 10:30 A.M. and 3:30 and 9:00 P.M. Rest always one-half hour before and after every meal.

7.—*Bathing* and *Clothes:*—Take a warm bath at least once a week and preferably twice, at bed-time. A cold sponge to the waist should be taken at least every morning. It is advisable to sponge the lower half of the body every night. The teeth should be cleansed with a brush at least twice daily, once in the morning before breakfast and once just after the last meal. Do not use too much clothes; use wraps whenever necessary. Never get overheated or chilly.

8.—*Cough* and *Expectoration:*—Control your cough as much as possible. Remember that in some cases it entails much exertion. Hold a piece of cheesecloth in front of your mouth and use a second piece as handkerchief. All cheese cloths for these purposes must be burned as soon as possible. Do not expectorate in the streets, or elsewhere.

9.—*Alcoholic Stimulants* and *Smoking:*—Better use no alcoholic stimulants of any kind. If you desire to smoke, obtain permission to do so from your physician.

10.—If you are planning on having a surgical operation or undertaking any unusual task, talk it over with your physician and get his advice before doing so.

I. J. KARLSBERG, M.D.

Fall River, Mass.

*Copies of these rules may be obtained from the author at two for five cents, plus postage.

Look for FACTS AND COMMENTS among the advertising pages at the back.

Benzedrine Sulphate in Gastro-Intestinal Spasm*

SPASM of the gastro-intestinal tract is a major clinical problem, particularly to the roentgenologist, as it occurs frequently and may be a confusing factor in x-ray examination of the digestive organs.

Benzedrine sulphate is a sympathomimetic drug which diminishes or abolishes these spasms, whether they are due to unpleasant emotions, to disease of the gastro-intestinal tract, or to a reflex from disease in other organs, thus facilitating x-ray studies.

The effect of the drug is almost immediate (begins in about 10 minutes and reaches its height in from 15 to 30 minutes) and is very rarely attended by any unpleasant side effects (which even then are not serious) but, on the contrary, is generally attended by a definite sense of wellbeing. Clinically it has been found of decided value in spastic colitis, pylorospasm, and similar conditions.

*J. A. M. A., July 4, 1936.

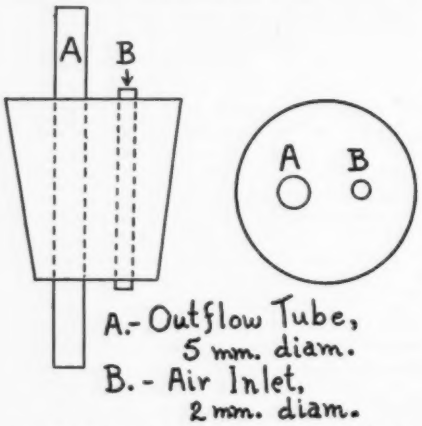
The usual dose for an adult is 30 mg. (½ grain), given by mouth. Very heavy patients may require 40 mg.; while thin and young patients are given 10 to 20 mg.

ABRAHAM MYERSON, M.D. and
MAX RITVO, M.D.

Boston, Mass.

Handy Wash and Irrigating Bottles

IN the past few years I have saved my drug bottles which had the capacity of a thousand aspirin tablets or more. Not knowing how to use them I began a little experimentation, which rewarded me well.



Showing how the glass tubes are arranged in the stopper.

I obtained rubber stoppers which had two holes in them, through which I inserted two glass tubes, sizes 2 mm. and 5 mm. in diameter, respectively. Cork stoppers may also be used if one has a punch to make the holes; or a druggist can make them.

Now I constantly have at hand twelve bottles of different strengths of various antiseptics, and in cases of emergency they are very practical to irrigate wounds, wash off infected articles, and to soak pads for galvanic work.

A quart-size irrigating bottle can thus be secured for less than five cents.

F. F. SCHWARTZ, M.D.

Fairport Harbor, O.

Painful Feet

PAIN and disability of the feet is one of the most common conditions to which the human body is subject. Most people have little respect for their feet, misusing them daily and practicing unwise economies at their expense.

People with painful feet are usually tired, cross and almost any effort seems too great for them. They cannot be pleasant companions or parents.

In most such cases, all that is necessary is to determine the size and type of shoes that the patient should wear, and then convince him (or usually her) that the orders given should be followed.—BRUCE GILL, M.D., quoted in *Weekly Roster and Med. Dig.* (Philadelphia), June 27, 1936.

[These comments point toward a wide and profitable field of practice, which most physicians are wholly neglecting. Doctors who *know* about foot disorders can prescribe properly for those who have them and convince them that orders must be followed. Those who do not know will let them drift to the chiropodists. Here is a little practice- and income-building specialty which is open to almost any doctor who will spend a reasonable amount of time and effort to learn it.—ED.]

Look for THE LEISURE HOUR among the advertising pages at the back.

The Committee Report on Contraception*

THE American Medical Association's Committee on Contraception has put undesirable, as well as desirable, features into its report. One or two sentences suggest professional jealousy. Outsiders are condemned for attempting to do that which the physicians have left undone. Some outsiders have doubtless made mistakes, but the physicians have only themselves to blame for this. If physicians as a whole faced the problem of contraception squarely and did their full duty, there would be no need of volunteer organizations of laymen. Even as things are, these lay organizations are almost pathetically eager for the advice, cooperation, and guidance of physicians.

ELLSWORTH HUNTINGTON, Ph.D.

New Haven, Conn.

Rapid Pulse and Heart Impairment

IT should be borne in mind that a rapid pulse is not always an indication of heart impairment. On the contrary, pulse rapidity may be an evidence that the circulation can rise to an emergency and give battle to an invasion by disease, and in this instance the rapid rate is a good omen, particularly in the absence of profound physical prostration. It is seldom indeed that the heart depressant drugs should be employed to reduce the pulse rate. Few are the hearts that require supportive measures. A heart depressant

J. of Contraception, June-July, 1936.

drug, to my mind, is synonymous with meddlesome therapeutics. Exaggerated heart rates should be brought down by rest, reassurance, elimination and sedation, by treating the underlying cause located elsewhere in the body and by employing all measures other than the alleged cardiocirculatory depressant drugs.—Dr. S. Calvin Smith, of Philadelphia, in *Med. Record*, Sept. 19, 1934.

Treatment of Drug Addicts*

I HAVE used Rossium in some 75 patients, for treatment of addiction to various opium alkaloids, as well as in many alcoholics, and have found that the use of this drug reduces the withdrawal symptoms and period of hospitalization more than any other treatment.

Comparing the withdrawal symptoms under Rossium with those under other forms of treatment, it will be seen that the gastrointestinal symptoms are reduced to a minimum. The muscular aches, joint pains, and abdominal cramps can be controlled by dextrose, the nervous restlessness and terrors can be controlled by small doses of codeine. The difference of the picture, compared with that of the controls, is most striking.

The dose of Rossium is governed by the weight of the patient. Multiply the weight of the patient by 0.05, and one obtains the number of grams of the drug to be used in 24 hours. If a patient weighs 120 pounds, the dose is 6 Gm., to be given in divided doses, 1 Gm. (15 grains) every 4 hours.

The instability of the nervous system, particularly the autonomic nervous system, during withdrawal is very much calmed and improved by the use of Rossium. During morphine withdrawal the balance of the autonomic nervous system is upset and vomiting, purging, sweating, and lacrimation are all symptoms of the overstimulated parasympathetic system; these are the symptoms which are greatly alleviated. I have also used this drug to quiet the excessive nervousness of alcoholics, and even to shorten the period of mental aberration in delirium tremens.

Alexander Lambert, M.D.

New York City.

Nasal Spray to Prevent Poliomyelitis

DRS. Charles Armstrong and W. T. Harrison, of the U.S. Public Health Service, have been experimenting on monkeys with a nasal spray to prevent poliomyelitis (infantile paralysis), and while they do not yet *recommend* it for use on human beings, now offer the formula to physicians who want to try it, in the presence of an epidemic.

If it is desired to use the solution, it should be sprayed into the nostrils three or four times on alternate days, and thereafter weekly during the presence of poliomyelitis. The spray tip should be pointed upward and backward at an angle of about 45 degrees, and the spraying should be thorough enough to reach the pharynx as well, when a bitter taste will be noted. The early applications at least should be administered by a physician.

The most effective solution so far developed during experimentation on monkeys is prepared as follows:

Solution A.—Dissolve one gram (1 Gm.) of picric acid in 100 cc. of physiologic salt solution (0.85%). (Warming facilitates solution of the picric acid.)

Solution B.—Dissolve one gram (1 Gm.) of sodium aluminum sulphate (sodium alum) in 100 cc. of physiologic salt solution (0.85%). Any turbidity in this solution should be removed by filtering one or more times through the same filter paper.

Mix solutions A and B in equal amounts. The resulting mixture, which contains 0.5 percent picric acid and 0.5 percent alum, is sufficiently antiseptic to prevent the growth of organisms and is ready for use as a spray. Homemade concoctions are not favored.—*Science News Letter*, July 25, 1936.

Get all you pay for. Read and use the Ads.

Trichomonas Vaginalis*

AN investigation carried out at the Venereal Diagnosis Clinic of the General Hospital, Birmingham, Eng., shows that, among the cases diagnosed as gonorrhea, 37.04 percent were infected with trichomonas. The disease is, therefore, fairly common.

Three methods of treatment were employed: Picric acid, 1-percent pessaries, were combined with 1-percent lactic acid douches. The results were quite good but slow in taking effect. Next, 1-percent tannic acid pessaries and sodium were used. This method was not so good as the picric acid. Lastly, Devegan treatment was started, and now it is used in all cases. The trichomonas are destroyed by this substance with amazing rapidity. In one patient, in whom there was a profuse discharge teeming with trichomonas, an examination 24 hours after treatment with Devegan, failed to disclose a single flagellate. This was after the introduction of only two tablets.

This drug is easy to use and gives the patient very little inconvenience. After the insertion of the tablet it is broken up in the vagina and forms a layer of paste, which clings to the walls so that there is no need

*New Eng. J. of M., July 9, 1936.

*J. Obst. & Gynec. Brit. Emp., Feb., 1396.

for tampons to keep the antiseptic in contact. At the start of treatment 2 tablets are used every day and continued until the discharge is well controlled. After this 1 tablet a day is necessary for at least 6 weeks, then 1 tablet weekly. Careful microscopic examination is made each time to discover if any organisms are present. All except 7 of 47 cases appear to be free from trichomonas after three months.

J. L. Collis, M.D.

Birmingham, England.

I am way ahead of the game on Clinical Medicine and Surgery, because I got one point out of it that will make me more money than I will ever pay for it. It is a very helpful magazine, and I wouldn't be without it.—R. S. S., M.D., Iowa.

Formalin Treatment of Chancroids*

ALTHOUGH small and superficial chancroids often yield to any form of antiseptic treatment, the more extensive and deeply-seated lesions do not respond well to the methods usually applied.

For ten years I have used, with uniformly good results, a method first suggested by Dr. O. A. Nelson, but never before published, to my knowledge.

An anesthetic is required, according to the size and location of the lesion. For small, superficial lesions, apply cocaine crystals topically; for extensive lesions on the glans or prepuce, use corporal block anesthesia; lesions near the base of the penis or in the groin, where infiltration anesthesia is impracticable, may require a slow spinal or caudal anesthesia.

The treatment proceeds as follows:

1.—Clean the ulcer thoroughly of all debris and secretion.

2.—Anesthetize.

3.—Swab for three to five minutes with undiluted formalin (37-percent formaldehyde solution, U.S.P.).

4.—Wipe off excess secretion and excess formalin.

5.—Apply a sterile, oily dressing.

6.—Later, use a one- to two-percent camphor ointment.

Healing occurs rapidly under a crust. In a majority of cases one application will suffice. This treatment immediately relieves pain. When used early, formalin will act as a prophylactic against inguinal adenopathy. I consider this method a specific.

Leonard H. Jacobsen, M.D.

Seattle, Wash.

*Urol. and Cutan. Rev., Mar., 1935.

Massive Doses of Vitamin D in Arthritis*

IN 67 unselected cases of chronic, nonspecific arthritis, massive doses of vitamin D produced clinical improvement in 44 cases, the best results being obtained in the rheumatoid type.

The initial daily dose, in all cases, was 200,000 units of U.S.P. vitamin D. Except in very severe or resistant cases, this dose was not exceeded for a month, and if clinical improvement occurred it was never exceeded. In resistant cases the dose was increased by 50,000 to 60,000 units a week until there was some improvement or evidence of overdosage—nausea, polyuria, lassitude, anorexia, and polydipsia. In a few stubborn cases as much as 1,000,000 units a day was given for a few days, and then reduced to 200,000 units. If toxic symptoms appeared, the medication was stopped, as it is conceivable that permanent injury to the patient might result from continuing this medication after the appearance of such symptoms.

The vitamin D treatment of arthritis need not and should not replace the use of recognized methods, but should be used in conjunction with them, as this type of medication is still in the experimental stage.

I. Dryer, M.D., and C. I. Reed, Ph.D.

Chicago, Ill.

*Arch. Phys. Ther., X-Ray, Radium, Sept., 1935.

The Seminar

(*Continued from Page 461*)

sive taste, and very offensive odors were present. He developed a staggering gait and a sense of unbalance.

He was removed to the hospital on the sixth day. The urine was negative; spinal puncture, negative—pressure 12 mm. of Hg; Wassermann test, negative: *Blood:* Hemoglobin, 67 percent; red cells, 3,120,00; leukocytes, 10,600; polymorphonuclears, 80 percent; large lymphocytes, 3 percent; small lymphocytes, 17 percent. The reflexes and eye grounds were normal.

A numb sensation developed over the entire skull. The vomiting persisted; weakness was pronounced; the temperature was never over 99° F.; the pulse varied from 72 to 80; the senses of smell and taste were still disturbed. The patient lost ten pounds during the first week, but remained at that weight throughout his illness.

Requirements: What is the diagnosis? What further examinations would you have made? How would you treat the case?

THUMBNAIL THERAPEUTICS

Pinworms

OXYURIS VERMICULARIS lays its eggs on the skin around the anus; therefore, in treating cases of pinworms, it is necessary, in addition to giving the usual enemas of infusion of quassia chips, to wash the pudendal region thoroughly with strong soapsuds after every stool and at bedtime, in order to destroy the eggs. If itching is felt after retiring, the patient should rise and scrub the parts with soap and water. After these washings, it is well to apply some good, mild dusting powder. —Dr. Irving S. Cutter, Chicago.

Dextrose in Malnutrition

A DIET rich in protein, minerals and vitamins, low in fats, and containing its carbohydrate largely in the form of dextrose, is best suited to produce a rapid and consistent gain in weight of undernourished children. The daily caloric intake should be above 50 calories per pound of body weight. —Genevieve Stearns, Ruth Catherwood and Abraham Kantrow, in *Proc. Soc. Exp. Biol. and Med.*, 1935, 32, 1463.

Pneumonia

PNEUMONIA patients should never be left unwatched, because of the danger of delirium, which may even lead to suicide.—*Science News Letter*, Apr. 25, 1936.

Anthralin Ointment in Psoriasis

IN a number of cases of psoriasis, which I have treated with dioxyanthranol 1-8 (marketed as Anthralin Ointment, in strengths of 0.1, 0.25, and 0.5 percent), more than 60 percent have cleared up satisfactorily.

This preparation is rarely irritating; can be used on the scalp and near the eyes without much risk of dermatitis; produces little discoloration; and does not cause constitutional symptoms.—Dr. Wm. J. MacDonald, in *Urol. & Cutan. Rev.*, Dec., 1935.

Meniere's Disease

MENIERE'S disease may be due to a transient arterial hypotension. Try giving ephedrine to relieve the symptoms.—Dr. O. H. Perry Pepper, of Philadelphia, before the Am. Coll. of Phys.

"Twilight Sleep"

INFANT mortality is not increased by properly administered scopolamine-morphine analgesia in obstetrics, though a few more infants may be a little slow in breathing. "Twilight sleep" is not passé. It is still giving good results in thousands of cases.—J. L. Wulff, M.D., St. Louis, Mo.

Raw Apple Diet in Diarrhea

IN cases of diarrhea in children, an exclusive diet of ripe, raw apple, scraped or grated, produces good results. From 10 to 30 tablespoonfuls are given daily for two days. If the apples are sour, a little mashed, ripe banana may be added. Slightly sweetened tea or water may be given to those who ask for it, and urged upon those who are dehydrated. —Dr. Sidney R. Kaliski, in *Tex. St. J. of M.*, July, 1935.

Benzedrine in Narcolepsy

BENZEDRINE has proved to be three times as effective as ephedrine, in the treatment of narcolepsy. Complete relief from sleep attacks was obtained in all of 9 cases treated, and practically complete relief from cataplexy, when it was present. It is best to begin with doses of 10 mg. three times a day, by mouth, and increase the dose gradually, as needed to secure results.—Drs. Prinzmetal and Bloomberg, in *J. A. M. A.*, Dec. 21, 1935.

Calcium and Digitalis

AN intravenous injection of calcium may kill a digitalized patient (two such deaths have been reported) by an "additive" effect.—Drs. Bower and Mengle, in *J.A.M.A.*, Apr. 4, 1936.

Insulin in Dysmenorrhea

IN a group of 12 patients, all nulliparas, suffering from primary or essential dysmenorrhea, 10 received practically total relief by using from 7 to 10 units of certain brands of insulin, daily, for from 3 to 7 days before, or during, the menstrual period. One or more brands of insulin seem not to produce this effect.—Dr. Alexander Altschul, in *J. A. M. A.*, Apr. 18, 1936.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE AND SURGERY, Medical & Dental Arts Bldg., Waukegan, Ill., is accompanied by a check for the published price of the book.

He that loves reading has everything within his reach.—GODWIN.

McDonagh: Colds and Influenza

THE COMMON COLD AND INFLUENZA AND THEIR RELATIONSHIP TO OTHER INFECTIONS IN MAN AND ANIMALS. The Nature of Disease Annual Reports for the Years 1934 and 1935. *By J. E. R. McDonagh, F.R.C.S. 99 Great Russell Street, London, W. C. 1: William Heinemann (Medical Books) Ltd. 1936. Price, $4.00.*

Since "colds" and influenza are the commonest causes of morbidity, in this country at least, and since their nature is still controversial, it behooves every practicing clinician to learn as much about these conditions as he can.

The one man who appears to have complete, basic, and coordinated idea of the nature of disease in general is J. E. R. McDonagh. It may be that his idea is mistaken, but until it is proved to be so (which certainly has not been done so far), all sincere medical men should be familiar with his theses. Those who have worked along the lines he lays down are enthusiastic about the results obtained.

The present volume is a follow-up of his three basic books on "The Nature of Disease," published in 1924, 1927, and 1931, and an outgrowth of the studies which have been reported in the three issues of the *Nature of Disease Journal*, which is to be continued.

The contents of this work were outlined in an article by the author, which appeared in CLIN. MED. & SURG. in September, 1932, on page 641. The frontispiece of the book is an elaborated version of the chart which accompanied that article, on page 643.

His main thesis is that most of the epidemic diseases are "infections from within," produced by mutation forms of the *Bacillus coli communis* and affecting the structure and electro-chemical balance of the ultramicroscopic protein particles of the blood plasma. He declares that influenza is not a specific disease and that the name itself is merely a modification of the word "influence," which our forbears applied to the acute manifestations of disease appearing in epidemic form at certain seasons of the year.

This wide angle of approach is particularly valuable at this time, when there is a tendency for research to become so specialized that its complete medical and scientific background is overlooked and the perspective lost.

McDonagh is writing more and more clearly as time goes on, and no studious person should have any difficulty in following his train of thought in this volume. The excellent charts and tables used assist in elucidating the text. The schematic presentation of therapy, which faces page 64, is especially helpful. The numerous and detailed case reports are decidedly convincing.

No physician who aspires to a high standing in his profession can now afford to be ignorant of McDonagh's work, even though his ideas should prove to be wrong, for he is offering an entirely new and soundly reasoned approach to the whole great problem of disease. The study of his works requires concentrated attention and thought, and so it is hard work, but there is ample evidence that the results will repay the effort.

From a practical standpoint, every active clinician will receive valuable help in planning the treatment of the various respiratory disorders which reach flood-tide during the winter; research workers who desire to see their specific problems in relation to the whole will find this book invaluable; and veterinarians will gain much assistance in the prevention and treatment of those diseases of animals which are so closely allied to certain disorders of man.

Bram: Exophthalmic Goiter

EXOPHTHALMIC GOITER AND ITS MEDICAL TREATMENT. *By Israel Bram, M.D., Medical Director, Bram Institute for the Treatment of Goiter and Other Diseases of the Ductless Glands, Upland, Pa., etc. Foreword by R. G. Hoskins, Ph.D., M.D. Second Edition Completely Revised and Enlarged, with 79 Illustrations. St. Louis: C. V. Mosby Company. 1936. Price, $6.00.*

Although opinions may widely differ in regard to the etiology and treatment of exophthalmic goiter, it may be admitted that Dr. Bram's book, which has now run into the second enlarged and revised edition, dealing with the nonsurgical management of this disease, is now accepted as a classic by the profession.

The author's personal experience is based on the observation of more than 5,000 cases. He regards the disease as being fundamentally associated with constitutional and personality factors and insists that in its man-

agement the patient should be considered as a whole, and not merely as a thyroid gland disturbance case, amenable to surgery alone or perhaps to intense radiation. Dr. Bram believes that exophthalmic goiter can most successfully be treated by medical, psychotherapeutic and hygienic measures; if surgery is employed, then the concomitant medical measures are most important. The point to be stressed is that the condition is not to be considered merely as a local thyroid disease.

This revised edition has been brought up to date in regard to contributions of importance in the domestic and foreign literature. The author includes a number of typical case histories.

Of the 22 chapters which make up the book, 20 are accompanied by numerous bibliographic references.

This is a book which every medical practitioner and general surgeon should have in his library.

Hutchinson: Index of Treatment

AN INDEX OF TREATMENT. *By Various Writers. Edited by Robert Hutchinson, M.D., LL.D., F.R.C.P., Consulting Physician, London Hospital, and Hospital for Sick Children, Great Ormond Street. Eleventh Edition, Revised. Baltimore: William Wood and Company. 1936. Price, $12.00.*

The tenth edition of this valuable work appeared in 1931, and the fact that another edition of a book as large and expensive as this has been called for in five years tells the tale of its popularity and usefulness. It is a complete guide to treatment in 1,000 pages, arranged alphabetically.

The physician is not embarrassed by a large choice of methods, but only the simplest and most effective procedures are described. There are no elaborate descriptions of major surgical operations, but the minor and emergency operations which any practitioner may have to perform, as well as all medical treatment, are given as explicitly as is required by clarity and practicality.

The entire volume has been revised and many sections rewritten. New subjects dealt with include allergic diseases, agranulocytosis, alkalosis, cisternal puncture, tetany in the adult, etc.

This is an invaluable reference book which, with French's "Index of Differential Diagnosis" (reviewed in this Journal in June, 1936, page 309), should be on the desk of every practicing clinician for daily use.

Nuzum: Cardiovascular-Renal Diseases

THE SPAN OF LIFE. As Influenced by the Heart, Kidneys and the Blood Vessels. *By Franklin R. Nuzum, B.S., M.D., F.A.C.P., Medical Director, Santa Barbara Cottage Hospital. Springfield and Baltimore: Charles C. Thomas. 1933. Price, $2.00.*

Practically one out of every two persons beyond the age of forty-five years will die of arteriosclerosis, chronic kidney disease, or heart disease. It therefore behooves every physician to be intimately familiar with the diagnosis and management of these disorders.

This book describes briefly the functions of the heart, the kidneys and the blood vessels. The important changes that may occur in the structure of these tissues are shown and the causes of these changes, in so far as they are known, are given. It suggests measures for their prevention, and, once they become established, it outlines the management of these changes. Line drawings are introduced where they are required to elucidate the text.

Few books are available which will give the physician as much highly practical information on these vital subjects as is contained in this delightfully written and beautifully made little volume. The section on electrocardiograms will, alone, be worth the price of the work to the many medical men who consider these valuable records as being beyond their comprehension. Moreover, the style and phraseology are such that the book can be recommended to educated and intelligent patients who are suffering from one of the conditions discussed.

The value of these essays is far beyond their price, and they should be in the hands of every practicing clinician.

Matsner: Technic of Contraception

THE TECHNIQUE OF CONTRACEPTION. An Outline. *By Eric M. Matsner, M.D. Foreword by Robert L. Dickinson, M.D. Third Edition. Baltimore: Williams & Wilkins Company. 1936. Price, $0.50.*

This brochure of 40 pages gives all the information which the physician requires to enable him to prescribe contraceptive measures intelligently and to instruct his patients in the indicated technics. Every physician who does not possess one of the larger works on this subject should provide himself with a copy of this inexpensive, but authoritative, outline, and should study it carefully, in order that he may discharge an important duty to his patients in a satisfactory manner.

Rowlands and Turner: Surgery

THE OPERATIONS OF SURGERY. *By R. P. Rowlands, M.S. Lond., F.R.C.S. Eng., Late Surgeon to Guy's Hospital; Late Lecturer on Surgery to the Medical School; and Philip Turner, B.Sc., M.S. Lond., F.R.C.S. Eng., Consulting Surgeon to Guy's Hospital; Formerly Lecturer on Surgery and Teacher of Operative Surgery to the Medical School. Eighth Edition. Volume I, the Upper Extremity; the Head and Neck; the Thorax; the Lower Extremity; the Vertebral Column. With 435 Illustrations (38 in Color). Baltimore: William Wood & Company. 1936. Price, $10.00.*

This is probably the best known and most popular British text and reference work on operative surgery, and is well known, through previous editions, to many American surgeons. It is authoritative and reliable and is practically a postgraduate course in the methods taught in the famous Guy's

Hospital. The clear, detailed and well-illustrated (many of the pictures are in colors) descriptions of technics are just what the operating surgeon needs to refresh his memory. They will also be of great value to the occasional operator who is called upon to undertake a surgical procedure with which he is unfamiliar. The bookwork is good and the index satisfactory.

The first volume includes operations on the upper and lower extremities, the head, neck and thorax, and the vertebral column. The second volume will appear in the autumn. The volumes may be purchased separately.

Hartman: The "Safe Period"

TIME OF OVULATION IN WOMEN. A Study on the Fertile Period in the Menstrual Cycle. *By Carl G. Hartman, Department of Embryology, Carnegie Institution of Washington, Johns Hopkins Medical School, Baltimore, etc. Baltimore: Williams & Wilkins Company. 1936. Price, $3.00.*

Within recent years books on the "safe period" have been numerous. In many of them there has been an undercurrent of propaganda, and many have been quite positive in their assertions concerning the time of the alleged "safe period" in the menstrual cycle.

The chief purpose of this book, which is sponsored by the National Committee on Maternal Health, Inc., is to give the practicing physician a concise yet comprehensive survey of the essential *facts* concerning the period of ovulation in women. Newer studies in the physiology of reproduction in the human female have clearly demonstrated at least a *relatively* fertile period and a *relatively* sterile period in the menstrual cycle. This is the work of, not one or two, but of many gynecologists, and is a clearly and pleasingly written and wholly scientific presentation of the subject—the first satisfactory book of its kind by an American author.

Presented without religious prejudice or scientific bias, the material is not intended primarily for the lay audience, but the biologically trained layman should be able to read the book with understanding, and it will be immensely helpful to physicians, clergymen, psychologists, and sociologists, by enabling them to give sound advice to earnest inquirers.

International Medical Annual, 1936

THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practitioner's Index. *Edited by H. Letheby Tidy, M.A., M.D. (Oxon.), F.R.C.P.; and A. Rendle Short, M.D., B.S., B.Sc., F.R.C.S. Fifty-Fourth Year. 1936. Baltimore: William Wood and Company. Price, $6.00.*

The busy practitioner very often lacks the time or opportunity or both for informing himself of medical progress throughout the world, and yet such is necessary if patients are to derive the benefits which they have a right to expect. Here is an annual volume which contains everything of importance published in the year's medical literature, with particular reference to treatment. The subjects are arranged alphabetically and one has the assurance of selective care and accuracy of description, as each article is signed by a well-known international authority on the subject treated. Great skill is displayed in condensing a large amount of material into one comparatively small volume.

Many physicians depend upon this annual survey to keep abreast of what is new in medical science and practice, and we can heartily recommend it as a handy and reliable desk reference book in recent advances. The very complete index is a notable feature. The type is rather small, although it is recognized that the use of a larger font would materially increase the size of the book.

Cobb: Nervous Disease

A PREFACE TO NERVOUS DISEASE. *By Stanley Cobb, A.B., M.D., Bullard Professor of Neuropathology, Harvard Medical School; Psychiatrist in Chief, Massachusetts General Hospital. Baltimore: William Wood & Company. 1936. Price, $2.50.*

Most physicians will admit that diseases of the nervous system are an unknown country to them, and this is, unfortunately true in many instances. There has been a need for a book like this one, giving a brief and clear description of the anatomy, physiology and pathology of the central nervous system, to serve as a point of orientation for the further study of those conditions included in the field of neurology, and those psychic disorders which are based upon anatomic or physiologic disturbances of the nervous system.

Charts, tables, and illuminating line drawings are used to illustrate the points made, and bibliographies adequate for all practical purposes are appended to each of the twelve chapters which make up the volume.

Almost any practicing clinician can improve his professional skill and acumen by a careful study of this brief and highly practical book.

Medical Papers

MEDICAL PAPERS. Dedicated to Henry Asbury Christian, Physician and Teacher. *From His Present and Past Associates and House Officers at the Peter Bent Brigham Hospital, Boston, Mass. Edited by Robert T. Monroe, Peter Bent Brigham Hospital, Boston, Massachusetts. Baltimore: Waverly Press, Inc. 1936.*

This beautiful volume is a tribute to Dr. H. A. Christian, on his sixtieth birthday, from his past and present friends and associates in the Harvard Medical School and Peter Bent Brigham Hospital, Boston. Dr. Christian has been connected with these institutions for the greatest part of his active life, and his influence in the teaching of clinical medicine, as well as his many contributions to the science and art of medicine, are universally admitted.

The book contains 102 contributions on multiform aspects of medical science and practice. These fill nearly one thousand closely printed pages. While it is impossible to refer in detail to these contributions, yet it is within the scope of a general review to point out that many of them represent original work on the part of the contributors and, so far as can be judged, all are excellent. The therapeutic papers are confined to the medical treatment of disease.

Several of the papers deal with heart disease and pathology of the vascular system, with which subjects Dr. Christian's name and teachings have been especially connected.

On the whole, the book is a very fitting recognition of the life of a man who has been conspicuous for more than a quarter of a century in the advancement of the medical treatment of disease in America. It has to be read thoughtfully to be fully appreciated, and many doctors will derive both benefit and pleasure from its perusal.

The bookwork—both binding and typography—calls for special commendation.

Fulton: History of Physiology

SELECTED READINGS IN THE HISTORY OF PHYSIOLOGY. *Edited by John Farquhar Fulton, M.D., Formerly Fellow of Magdalen College, Oxford; Sterling Professor of Physiology, Yale University. Springfield and Baltimore: Charles C Thomas. Price, $5.00.*

The physician who has a true vocation is always a student and is eager to obtain as wide a background for his daily labors as is possible.

This source book contains a collection of original descriptions, arranged by subject, of great discoveries and contributions in physiology, going back to Aristotle and containing such matters as Harvey's description of the circulation of the blood, Boyle's observations on respiration, William Beaumont's report on the physiology of digestion, and many others. Each selection is preceded by brief explanatory notes.

The book (as is usually the case with Thomas' publications) is beautifully made, and the illustrations are most unusual and highly interesting. It will be a joy to every medical bibliophile and literateur.

New Books Received

The following books have been received in this office and will be reviewed in our pages as rapidly as possible.

A TEXT-BOOK OF PHYSIOLOGY. *By H. E. Roaf, M.D. Toronto, D.Sc. Liverpool, M.R.C.S., L.R.C.P. 2nd Edition. Baltimore: William Wood & Company. 1936. Price, $4.25.*

THE ENDOCRINE ORGANS IN HEALTH AND DISEASE. With an Historical Review. *By Sir Humphry Davy Rolleston, Bart., G.C.V.O., K.C.B., M.D., Hon. D.Sc., D.C.L., LL.D. New York: Oxford University Press. 1936. Price, $13.00.*

THEORY AND PRACTICE OF PSYCHIATRY. *By William S. Sadler, M.D. St. Louis: The C. V. Mosby Company. 1936. Price, $10.00.*

THE THYROID. Surgery, Syndromes, Treatment. *By E. P. Sloan, M.D. Edited by Members of the Sloan Clinic, Guy A. Sloan, M.D., H. P. Sloan, M.D., Frank Deneen, M.D., H. W. Wellmerling, M.D., and O. H. Ball, M.D. Foreword by Wm. Seaman Bainbridge, M.D. Springfield: Charles C Thomas. 1936. Price, $10.00.*

THE ANAEMIAS. *By Janet M. Vaughan, D.M. (Oxon.), M.R.C.P. (Lond.) 2nd Edition. With Notes on Normal and Pathological Erythropoiesis by Hubert M. Turnbull, D.M., (Oxon.), F.R.C.P. (Lond.). New York: Oxford University Press. 1936. Price, $4.50.*

ENDOCRINOLOGY IN MODERN PRACTICE. *By William Wolf, M.D., M.S., Ph.D. Philadelphia and London: W.B. Saunders Company. 1936. Price, $10.00.*

CONTRACEPTION AS A THERAPEUTIC MEASURE. *By Bessie L. Moses, M.D. Baltimore: The Williams & Wilkins Company. 1936. Price, $1.00.*

APPLIED PHYSIOLOGY. *By Samson Wright, M.D., F.R.C.P. 6th Edition. New York: Oxford University Press. 1936. Price, $6.00.*

A TREATISE ON THE SEVEN RAYS. The New Psychology. *By Alice A. Bailey. New York: Lucis Publishing Company. 1936. Price, $3.00.*

A DIABETIC MANUAL. For Practitioners and Patients. *By Edward L. Bortz, A.B., M.D., F.A.C.P. With a Foreword by George Morris Piersol, B.S., M.D., F.A.C.P. Philadelphia: F. A. Davis Company. 1936. Price, $2.00.*

SYMPTOMS AND SIGNS IN CLINICAL MEDICINE. An Introduction to Medical Diagnosis. *By Noble Chamberlain, M.D., M.Sc., M.R.C.P. With a Chapter on the Examination of Sick Children by Norman B. Capon, M.D., F.R.C.P. Baltimore: William Wood & Company. 1936. Price, $8.00.*

PHYSICIAN, PASTOR, AND PATIENT. Problems in Pastoral Medicine. *By George W. Jacoby, M.D. New York and London: Paul B. Hoeber, Inc. 1936. Price, $3.50.*

GYNECOLOGY AND OBSTETRICS. *By Edwin M. Jameson, M.D. Clio Medica Series, Vol. XVII. Edited by E. B. Krumbhaar, M.D. New York: Paul B. Hoeber, Inc. 1936. Price, $2.00.*

CYSTOSCOPY AND UROGRAPHY. *By Jas. B. Macalpine, F.R.C.S. (Eng.) 2nd Edition, Revised and Enlarged. Baltimore: William Wood & Company. 1936. Price, $9.00.*

SQUINT TRAINING. *By M. A. Pugh, M.R.C.S. (Eng.), L.R.C.P. (Lond.) New York: Oxford University Press. 1936. Price, $2.75.*

MEDICAL NEWS

Sir Henry S. Wellcome.

Passing of Sir Henry Wellcome

SIR Henry Wellcome, famous British (naturalized) scientist and patron of the sciences; founder of the Wellcome Research Institution and the Wellcome Historical Medical Museum (both of London, England), passed to his well-earned rest on July 25, 1936, at the ripe age of 83 years.

Although the British "Who's Who" is silent regarding his early life, the records show that his father was a clergyman and a missionary to the Indians in the wilderness near Almond, Wis. (about 125 miles from Milwaukee), where Henry was born in a log cabin.

When Henry was a child, his father was sent to Rochester, Minnesota, where the boy met Dr. William Worrell Mayo, father of the famous brothers Charles and William, who took a liking to the lad and encouraged him to study pharmacy. His studies began at the Chicago College of Pharmacy, and were finished at Philadelphia, when he was 21 years old.

After graduation he spent several years as a retail druggist and as a representative of McKesson and Robbins.

Business took young Mr. Wellcome to England where, in 1880, he established, with Silas M. Burroughs, the pharmaceutical manufacturing firm of Burroughs, Wellcome and Co., and did so well that he adopted that country as his home and became a British citizen, though he made frequent visits to his native land. In 1932 he was knighted by King George V.

The list of his honors and achievements begins in 1885, with his winning of the Royal Humane Society's life-saving medal; and as lately as 1927, he founded the Lady Stanley Maternity Hospital in Uganda, Central Africa. The bare statement of what went between would fill a column or two.

With his passing, the world has lost a picturesque figure and a man whose services to science, and especially to medicine (he was, among other things, an honorary fellow of the Royal College of Surgeons), were incalculable. A man who did such fine and imperishable things with his wealth and his energy can ill be spared.

Distinguished Guests at Interstate Postgraduate Assembly

AMONG the guest-teachers at the big postgraduate school known as the International Postgraduate Medical Assembly, which will be held in St. Paul, Minn., October 12 to 16, inclusive, will be four distinguished British medical teachers: Robert D. Lawrence, M.A., M.D., F.R.C.P., of London; Francis J. Charteris, M.D., Ch.B., of St. Andrews, Scotland; Archibald H. McIndoe, M.B., Ch.B., M.Sc., M.S., F.A.C.S., F.R.C.S., of London; and C. Naunton Morgan, F.R.C.S., of London. Dr. Charles G. Heyd, president of the A.M.A., will also be on the program, along with many other notables.

New Manager for Medical Editors' and Authors' Association

DUE to press of other duties, Dr. H. Lyons Hunt, who has been manager of the American Medical Editors' and Authors' Association since its reorganization some seven or eight years ago, has been forced to give up that position, and Dr. Harold Hays, of New York City, has been selected to fill it. All members of the Association should cooperate actively with Dr. Hays in making it the real force in the professional and literary life of the physicians of the nation which it can be made.

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W-922 Tablets Bi-Oxalate Compound. For the Treatment of Pyloric Spasms. The Zemmer Company.

W-923 Chart of the Inguinal Region, with Technic for the Treatment of Hernia by Injection. The Farnsworth Labs.

W-924 The Hemorrhoidal Lesion. What Causes It? Schering & Glatz, Inc.

W-928 Glucophylline. Abbott Laboratories.

W-929 Chappel's Intramuscular Liver Concentrate. Chappel Bros., Inc.

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